

# CV Management

## Basis Information

Name in Chinese	羅傳倫	Name in English	ROFFLER ,STEVE
Country	美國	E-mail	sroff58@gate.sinica.edu.tw
Research Area	免疫學 Immunology		
Research Description	Nanomedicine development, antibody engineering, anti-PEG antibodies and their biological effects		

## Education

Item	School	Country	Department	Degree	Date (Start)	Date (End)
1	加州柏克萊大學	美國	化學工程	博士	1981/09/01	1986/09/01
2	西雅圖華盛頓大學	美國	化學工程學系	大學	1979/01/01	1981/06/01
3	葛雷斯哈伯學院	美國	化學工程學系	大學	1976/09/01	1978/06/01

## Experience

Item	Institution	Department	Job Title	Date (Start)	Date (End)
1	中央研究院		助研究員	1991/10/24	1998/10/08
2	中央研究院		副研究員	1998/10/08	2004/02/16
3	中央研究院		研究員	2004/02/16	2018/07/26
4	中央研究院		特聘研究員	2018/07/26	迄今

## Publications

1	Bispecific antibodies for targeted delivery of anti-cancer therapeutic agents: A review. Journal of controlled release : official journal of the Controlled Release Society 2023-06 Beishenaliev A, Loke YL, Goh SJ, Geo HN, Mugila M, Misran M, Chung LY, Kiew LV*, Roffler S*, Teo YY*
2	Signal peptide-CUB-EGF-like repeat-containing protein 1-promoted FLT3 signaling is critical for the initiation and maintenance of MLL-rearranged acute leukemia. Haematologica 2023-05 Sahoo BK, Lin YC, Tu CF, Lin CC, Liao WJ, Li FA, Li LH, Mou KY, Roffler SR, Wang SP, Yeh CT, Yao CY, Hou HA, Chou WC, Tien HF, Yang RB
3	Antibodies against Poly(ethylene glycol) Activate Innate Immune Cells and Induce Hypersensitivity Reactions to PEGylated Nanomedicines. ACS nano 2023-03 Chen WA, Chang DY, Chen BM, Lin YC, Barenholz Y*, Roffler SR*
4	Anti-PEG antibodies before and after a first dose of Comirnaty® (mRNA-LNP-based SARS-CoV-2 vaccine). Journal of controlled release : official journal of the Controlled Release Society 2023-02 Bavli Y, Chen BM, Gross G, Hershko A, Turjeman K, Roffler S*, Barenholz Y*
5	Accelerated clearance by antibodies against methoxy PEG depends on pegylation architecture. Journal of controlled release : official journal of the Controlled Release Society 2023-02 Lin YC, Chen BM, Tran TTM, Chang TC, Al-Qaisi TS, Roffler SR*

6	<p>Glucuronides: From biological waste to bio-nanomedical applications.  Journal of controlled release : official journal of the Controlled Release Society  2022-09  Burnouf PA, Roffler SR, Wu CC, Su YC</p>
7	<p>Structural determination of an antibody that specifically recognizes polyethylene glycol with a terminal methoxy group.  Communications chemistry  2022-06  Nguyen MT, Shih YC, Lin MH, Roffler SR, Hsiao CY, Cheng TL, Lin WW, Lin EC, Jong YJ, Chang CY, Su YC</p>
8	<p>Translational development of a tumor junction opening technology.  Scientific reports  2022-05  Kim J, Li C, Wang H, Kaviraj S, Singh S, Savergave L, Raghuwanshi A, Gil S, Germond A, Baldessari A, Chen B, Roffler S, Fender P, Drescher C, Carter D, Lieber A</p>
9	<p>Development of Irinotecan Liposome Armed with Dual-Target Anti-Epidermal Growth Factor Receptor and Anti-Fibroblast Activation Protein-Specific Antibody for Pancreatic Cancer Treatment.  Pharmaceutics  2022-05  Lin HJ, Liang TL, Chang YY, Liu DZ, Fan JY, Roffler SR, Lin SY</p>
10	<p>In Vivo Hematopoietic Stem Cell Gene Therapy for SARS-CoV2 Infection Using a Decoy Receptor.  Human gene therapy  2022-04  Wang H, Li C, Obadan AO, Frizzell H, Hsiang TY, Gil S, Germond A, Fountain C, Baldessari A, Roffler S, Kiem HP, Fuller DH, Lieber A</p>
11	<p>Bispecific T-cell engagers non-covalently decorated drug-loaded PEGylated nanocarriers for cancer immunochemotherapy.  Journal of controlled release : official journal of the Controlled Release Society  2022-04  Cheng WJ, Chuang KH, Lo YJ, Chen M, Chen YJ, Roffler SR, Ho HO, Lin SY, Sheu MT</p>
12	<p>Inhibition of gut microbial <math>\beta</math>-glucuronidase effectively prevents carcinogen-induced microbial dysbiosis and intestinal tumorigenesis.  Pharmacological research  2022-03  Cheng KW, Tseng CH, Chen IJ, Huang BC, Liu HJ, Ho KW, Lin WW, Chuang CH, Huang MY, Leu YL, Roffler SR, Wang JY, Chen YL, Cheng TL,</p>
13	<p>Impact of anti-PEG antibody affinity on accelerated blood clearance of pegylated epoetin beta in mice.  Biomedicine &amp; pharmacotherapy  2022-02  Chang TC, Chen BM, Wu JY, Cheng TL, Roffler S*</p>
14	<p>The interplay between membrane topology and mechanical forces in regulating T cell receptor activity.  Communications biology  2022-01  Al-Aghbar MA, Jainarayanan AK, Dustin ML*, Roffler SR*</p>
15	<p>A novel anti-tumor/anti-tumor-associated fibroblast/anti-mPEG tri-specific antibody to maximize the efficacy of mPEGylated nanomedicines against fibroblast-rich solid tumor.  Biomaterials science  2021-12  Chen M, Sheu MT, Cheng TL, Roffler SR, Lin SY, Chen YJ, Cheng YA, Cheng JJ, Chang HY, Wu TY, Kao AP, Ho YS, Chuang KH</p>
16	<p>Polyethylene Glycol Immunogenicity: Theoretical, Clinical, and Practical Aspects of Anti-Polyethylene Glycol Antibodies.  ACS nano  2021-09  Chen BM, Cheng TL, Roffler SR*</p>

17	<p>Replacement of L-amino acid peptides with D-amino acid peptides mitigates anti-PEG antibody generation against polymer-peptide conjugates in mice.</p> <p>Journal of controlled release : official journal of the Controlled Release Society 2021-03 Sylvestre M, Lv S, Yang LF, Luera N, Peeler DJ, Chen BM, Roffler SR, Pun SH</p>
18	<p>Entropy-driven binding of gut bacterial <math>\beta</math>-glucuronidase inhibitors ameliorates irinotecan-induced toxicity.</p> <p>Communications biology 2021-03 Lin HY, Chen CY, Lin TC, Yeh LF, Hsieh WC, Gao S, Burnouf PA, Chen BM, Hsieh TJ, Dashnyam P, Kuo YH, Tu Z, Roffler SR*, Lin CH*</p>
19	<p>Double attack strategy for leukemia using a pre-targeting bispecific antibody (CD20 Ab-mPEG scFv) and actively attracting PEGylated liposomal doxorubicin to enhance anti-tumor activity.</p> <p>Journal of nanobiotechnology 2021-01 Ho KW, Chen IU, Cheng YA, Liao TY, Liu ES, Chen HJ, Lu YC, Su YC, Roffler SR, Huang BC, Liu HJ, Huang MY, Chen CY, Cheng TL,</p>
20	<p>Flow cytometry analysis of anti-polyethylene glycol antibodies in human plasma.</p> <p>Toxicology reports 2020-12 Fang JL, Beland FA, Tang Y, Roffler SR</p>
21	<p>Premature Drug Release from Polyethylene Glycol (PEG)-Coated Liposomal Doxorubicin via Formation of the Membrane Attack Complex.</p> <p>ACS nano 2020-07 Chen E, Chen BM, Su YC, Chang YC, Cheng TL, Barenholz Y*, Roffler SR*</p>
22	<p>Bispecific antibody (HER2 <math>\times</math> mPEG) enhances anti-cancer effects by precise targeting and accumulation of mPEGylated liposomes.</p> <p>Acta biomaterialia 2020-07 Chen IJ, Cheng YA, Ho KW, Lin WW, Cheng KW, Lu YC, Hsieh YC, Huang CC, Chuang CH, Chen FM, Su YC, Roffler SR*, Cheng TL*</p>
23	<p>Structural basis of polyethylene glycol recognition by antibody.</p> <p>Journal of biomedical science 2020-01 Lee CC, Su YC, Ko TP, Lin LL, Yang CY, Chang SS, Roffler SR*, Wang AH*</p>
24	<p>PEGylated Liposomal Methyl Prednisolone Succinate does not Induce Infusion Reactions in Patients: A Correlation Between in Vitro Immunological and in Vivo Clinical Studies.</p> <p>Molecules (Basel, Switzerland) 2020-01 Bavli Y, Chen BM, Roffler SR, Dobrovolskaia MA, Elnekave E, Ash S, Barenholz Y, Turjeman K</p>
25	<p>Both IgM and IgG Antibodies Against Polyethylene Glycol Can Alter the Biological Activity of Methoxy Polyethylene Glycol-Epoetin Beta in Mice.</p> <p>Pharmaceutics 2019-12 Chang TC, Chen BM, Lin WW, Yu PH, Chiu YW, Chen YT, Wu JY, Cheng TL, Hwang DY, Roffler AS*</p>
26	<p>Enhanced drug internalization and therapeutic efficacy of PEGylated nanoparticles by one-step formulation with anti-mPEG bispecific antibody in intrinsic drug-resistant breast cancer.</p> <p>Biomaterials science 2019-08 Cheng YA, Chen IJ, Su YC, Cheng KW, Lu YC, Lin WW, Hsieh YC, Kao CH, Chen FM, Roffler SR*, Cheng TL*</p>
27	<p>Simply Mixing Poly Protein G with Detection Antibodies Enhances the Detection Limit and Sensitivity of Immunoassays.</p> <p>Analytical chemistry 2019-07 Chen YJ, Chen M, Cheng TL, Roffler SR, Lin SY, Hsu HL, Wang CH, Chen CY, Kao AP, Cheng JJ, Chuang KH</p>

28	Doxebo (doxorubicin-free Doxil-like liposomes) is safe to use as a pre-treatment to prevent infusion reactions to PEGylated nanodrugs. Journal of controlled release : official journal of the Controlled Release Society 2019-07 Bavli Y, Winkler I, Chen BM, Roffler S, Cohen R, Szebeni J, Barenholz Y,
29	Transient AID expression for in situ mutagenesis with improved cellular fitness. Scientific reports 2018-06 Al-Qaisi TS, Su YC, Roffler SR*
30	Reversible glycosidic switch for secure delivery of molecular nanocargos. Nature communications 2018-05 Burnouf PA, Leu YL, Su YC, Wu K, Lin WC, Roffler SR*
31	Pre-existing anti-polyethylene glycol antibody reduces the therapeutic efficacy and pharmacokinetics of PEGylated liposomes. Theranostics 2018-05 Hsieh YC, Wang HE, Lin WW, Roffler SR, Cheng TC, Su YC, Li JJ, Chen CC, Huang CH, Chen BM, Wang JY, Cheng TL, Chen FM,
32	High-Affinity Ligands Can Trigger T Cell Receptor Signaling Without CD45 Segregation. Frontiers in immunology 2018-04 Al-Aghbar MA, Chu YS, Chen BM, Roffler SR*
33	A genome-wide association study identifies a novel susceptibility locus for the immunogenicity of polyethylene glycol. Nature communications 2017-09 Chang CJ, Chen CH, Chen BM, Su YC, Chen YT, Hershfield MS, Lee MM, Cheng TL, Chen YT*, Roffler SR*, Wu JY*
34	The Affinity of Elongated Membrane-Tethered Ligands Determines Potency of T Cell Receptor Triggering. Frontiers in immunology 2017-07 Chen BM, Al-Aghbar MA, Lee CH, Chang TC, Su YC, Li YC, Chang SE, Chen CC, Chung TH, Liao YC, Lee CH, Roffler SR*
35	Conditional internalization of PEGylated nanomedicines by PEG engagers for triple negative breast cancer therapy. Nature communications 2017-06 Su YC, Burnouf PA, Chuang KH, Chen BM, Cheng TL, Roffler SR*

## Awards and Honors

Item	Awards and Honors	Award Date
1	Ministry of Education's 63rd Annual Academic Award (63屆教育部學術獎)	2022
2	Outstanding Research Award of the Taiwan Nanomedicine Society	2022
3	MOST Outstanding Research Award	2020
4	Ministry of Economic Affairs 6th National Industrial Innovation Award (第6屆經濟部國家產業創新獎個人類獎項)	2019
5	25th TECO Technology Foundation's Outstanding Achievement Award in Biomedical Technology (第二十五屆東元獎)	2018
6	14th Tien Te Lee Outstanding Award (14th永信李天德醫藥科技)	2018
7	MOST Outstanding Research Award	2017