

CURRICULUM VITAE

BIOGRAPHICAL

Name Steve Roffler

Birthplace Seattle, Washington U.S.A.

Citizenship USA

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Lane 61, Alley 4, No. 14, 3F
Taipei, Taiwan
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EDUCATION

1987		National Taiwan University Taipei, Taiwan	Advanced Chinese
1986	Ph.D.	University of California Berkeley, CA	Chemical Engineering
1981	B.S.	University of Washington Seattle, WA	Chemical Engineering

EXPERIENCE

2004-		Cancer Research Division Institute of Biomedical Sciences Academia Sinica Taipei, Taiwan	Research Fellow
2007-		Editorial Advisory Board, Bioconjugate Chemistry	
2006-		Editorial Advisory Board, Current Drug Delivery	
2003-		National Yang Ming University Program in Molecular Medicine	Adjunct Associate Professor
1998-2004		Cancer Research Division Institute of Biomedical Sciences Academia Sinica	Associate Research Fellow

	Taipei, Taiwan	
2000-	Program Project on Metastasis	Coordinator
1991-1998	Cancer Research Division Institute of Biomedical Sciences Academia Sinica Taipei, Taiwan	Assistant Research Fellow
1995-2005	Chinese Pharmaceutical Journal	English Editor
1992-	National Defense Medical Center Taipei, Taiwan	Adjunct Associate Professor
1987-1991	Department of Microbiology and Immunology National Defense Medical Center Taipei, Taiwan	Postdoc
1985	Engenics Menlo Park, California	Consultant
1981	Air Products Allentown, Pennsylvania	Intern

Courses Taught

1993-1994: Immunological Techniques, Department of Microbiology and Immunology, National Defense Medical Center.

1995-1996: Immunological techniques, Department of Biology, Fu Ren Catholic University

2000-2001: B-cell Immunology, National Tsing Hua University.

Advanced Immunology, National Defense Medical School, Spring 2003, 2004, 2008.

2007~2008: Coordinator – Molecular Medicine Seminar

2008~2010: Institute of Information Science – Basic Molecular Biology – Introduction to Immunology.

2009~present: TIGP Molecular Medicine - Experimental Approaches in Molecular Medicine – Protein Drug Design

2008~present: Graduate Institute of Life Sciences, National Defense Medical Center – Tumor Immunology

2006~present: TIGP Molecular Medicine - Cellular and Molecular Immunology

2014~present: TIGP Molecular Medicine Program – Molecular Medicine – Drug, Protein and Nanoparticles

Graduate Students

Shing-Ming Wang, Ph.D.	Yi-Hsin Chan, M.S.	Mu-Hsien Yu, Ph.D.
Guang-Wen Liao, M.S.	Hui-Yuan Chang, M.S.	Shao-Lun Wei, M.S.
Bing-Mae Chen, M.S.	Wan-Zhi Chou, Ph. D.	Elaine Su, M.S.
Guang-Wen Liao, Ph.D.	Hung Tsuey-Fang, M.S.	Yu-Lin Leu, Ph.D.
Tian-Lu Cheng, Ph.D.	Ting-Yi Juan, Ph.D.	Ya-Chen Li, Ph.D.
Kai-Chuan Chen, Ph.D.	Yu-Cheng Su, Ph.D.	Huai-Yao Chuang, Ph.D
Jame Shieh, Ph.D.	Teresa Tung, Ph.D.	Pierre Alain Burnouf. Ph.D.
Talal Qaisi, Ph.D.	Mohammad Ameen Al-Aghbar, Ph.D.	
Tien-Ching Chang, Ph.D.	Saborni Chattopadhyay, Ph.D.	

Post-Docs

Dr. Zeljko Prijovich
 Dr. Vinod Singh
 Dr. Wolfgang Schechinger
 Dr. Tian-Lu Cheng
 Dr. Kai-Chuan Chen
 Dr. Yu-Cheng Su

Summer Students

Sue-Ching Chen	Lu Han Lin	Lai-Man Hui
Tian-Chun Chang	Chi-Ying Yang	Shin-Yi Sheng
Shu-Fen Chiu	Bor-Giun Lin	Joe Chang
Shaio-Yu Ma	Maw-Liang Chen	Jing-Ling Chen
Meng-Shun Wu	Yi-Yin Lu	Sheng-Hao Chao
Pin-I Wu	Tsuey-Fang Hung	Chi-Yun Lin
Yi-Lu Ke	Angie Lin	Yao-Yun Fan
Cheng-Feng Luo	Albert Wu	Alysia Lo
Katherine Lee	Meghan Roffler	Jacky Chen
Andrew Hsieh		

Awards and scholarships

AICHE Outstanding Senior Chemical Engineering Student Award (University of Washington, 1981)

Lockhead Scholarship

Chevron Scholarship

Hillary Scholarship, 1981-1986

Graduated Summa cum laude, Dept of Chemical Engineering, University of Washington with a cumulative GPA of 3.86.

R.O.C. National Science Council Excellent Research Awards (several)

Journal Editorial Boards

Bioconjugate Chemistry

Current Drug Delivery

The Open Drug Delivery Journal

International grant reviews

Dutch Cancer Society

Cancer Research UK

Genesis Oncology Trust, NZ

Journal reviewer

2015: Mol. Cancer Ther., PLOS One, Acta Biomaterialia

2014: Nature Scientific Reports, PLOS One, Acta Biomaterialia

2013: Bioconjugate Chemistry, Acta Biomaterialia, Molecular Immunology, BBA - General Subjects

2012: BBA-General Subjects, Science Signaling, J. Biomed. Sci., Bioconjugate Chemistry, Frontiers in Immunology, Tumor Biology, Acta Biomaterialia

2011: Molecular Imaging, Bioconjugate Chemistry, Biomacromolecules, Cancer Letters, Biochemical Pharmacology

2010: Biochem Pharm, FEBS Journal, Mol Microb Sci, Appl Rad Isotopes, Bioconj Chem (multiple), Current Cancer Drug Targets, ACS Med Chem Letters, Histology Histopath

2009: Mol Microb Sci, Bioconj Chem, Cancer Let, J Biomed Sci, Clinical Exp Med, Med Res Rev

2008: J Biom Sci, Cancer Letters, Bioconj Chem (multiple)

2007: Bioconj Chem (multiple), *Open Drug Deliv Rev*, Nature Med, J Controlled Release

2006: Cur Drug Deliv, J Cont Release, Bioconj Chem, FEBS Lett, Cell Biol Int, Exp Opin Biol Ther

Patents

SR Roffler, MY Yeh, SM Wang, JW Chern and E Tung. Activation of glucuronide prodrugs by beta-glucuronidase-antibody conjugates. R.O.C. # 81103064, 1992.

SR Roffler, JW Chern and YL Leu (2000) Proactive antitumor compounds. US. Patent # 6,043,367

SR Roffler, TL Cheng and PY Wu (2003) Monoclonal antibody for analysis and clearance of polyethylene glycol and polyethylene glycol-modified molecules. US Patent # 6,596,849

SR Roffler, TL Cheng and PY Wu (2003) Monoclonal antibody for analysis and clearance of polyethylene glycol and polyethylene glycol-modified molecules United States Patent # 6,617,118

SR Roffler, Ji-Wang Chern and Ye-Lin Leu (2003) Proactive antitumor compounds. European Patent EP 0990661.

SR Roffler et al. (2004) Chimeric protein and method of controlling tumor growth using the protein. US Patent 6,699,972

SR Roffler et al. (2004) Proactive antitumor compounds. ROC Patent 205511

SR Roffler et al. (2005) Monoclonal-antibody for analysis and clearance of polyethylene glycol and polyethylene glycol-modified molecules. U.S. Patent Application 10/620,091.

SR Roffler, Tian-Lu Cheng and Pin-Yi Wu (2008) Monoclonal antibody for analysis and clearance of polyethylene glycol and polyethylene glycol-modified molecules. US Patent 7,320, 791 B2.

BQC-G, A tumor-selective anti-cancer prodrug. Zeljko M. Prijovich, Yu-Lin Leu, Steve R. Roffler. U.S. Provisional Application (Appl. Ser. No. 61/264,294, Pending)

Human Beta-Glucuronidase Mutants with Elevated Enzymatic Activity under Physiological Conditions and Method for Identifying Such. US Patent Application Docket Number 12A-970630 Pending

Human Beta-Glucuronidase Mutants with Elevated Enzymatic Activity under Physiological Conditions and Method for Identifying Such. Taiwan patent 098140470 (5-21-2013 ~ 11/25/2029)

SR Roffler and YC Su (2013) In situ affinity maturation of antibodies. (US provisional patent application).

Steven R. Roffler, Tian-Lu Cheng, Yu-Cheng Su, Kuo-Hsiang Chuang, and Tung, Hsin-Yi. BI-SPECIFIC ANTIBODIES AND USES THEREOF. US provisional patent application No. 61/946,997 (3-3-2014)

Tian-Lu Cheng, Steven R. Roffler, Chien-Han Kao, and Bing-Mae Chen. BI-SPECIFIC ANTIBODIES FOR TREATING CANCER. US provisional patent application No. 61/946,980 (3-3-2014)

SR Roffler, TL Cheng, CH Kao, BM Chen, YC Su and HY Tung. BI-SPECIFIC ANTIBODIES AND USES THEREOF. US patent application (3-3-2015).

P Hsieh, PJ Wu, SR Roffler. A reloadable delivery system for systemically administered therapeutics. (Provisional patent submitted 2014)

Licenses

Monoclonal antibodies against Phospholipase C delta 3. Licensed to Neomarkers, 1997.

Monoclonal antibody against polyethylene glycol. Licensed to Hoffmann-LaRoche, 1999.

Monoclonal antibody against polyethylene glycol. Licensed to Bayer, 2004.

Monoclonal antibody against polyethylene glycol. Licensed to Merck, 2006.

PEG ELISA kit. Licensed to Abnova, 2009.

E11 hybridoma Licenced to Stem Cell Technologies, 2013

Technology Transfers

1999: 3 commercial transfers

2000: 2 commercial transfers

2001: 1 commercial transfer

2002: 3 commercial transfers

2003: 10 commercial transfers

2004: 37 commercial transfers

2005: 25 commercial transfers

2006: 40 commercial transfers

2007: 34 commercial transfers

2008: 25 commercial transfers

2009: 21 commercial transfers

2010: 29 commercial transfers

2011: 38 commercial transfers

2012: 38 commercial transfers

2013: 37 commercial transfers

2014: 56 commercial transfers

Publications

WC Huang, PA Burnouf, YC Su, BM Cheng, CW Lee, PK Wei, TL Cheng and SR Roffler*. Cellular Chimeric Receptors for Facile Investigation of Targeted Stealth Nanoparticles (Submitted).

ZM Prijovich, PA Burnouf, PT Huang, KC Chen, TL Cheng, YL Leu and SR Roffler*. BQC-G, a camptothecin-glucuronide prodrug for enzyme/prodrug based targeted tumor therapy (Submitted).

YT Hsieh, PT Huang, ZM Projovich and SR Roffler*. Effect of cellular location of human carboxylesterase 2 on CPT-11 hydrolysis and antitumor activity. (Under revision)

HY Chuang, CS Suen, MJ Hwang and SR Roffler*. Toward reducing immunogenicity of enzyme replacement therapy: altering the specificity of human beta-glucuronidase to

compensate for alpha-iduronidase deficiency. **Protein Eng Des Sel.** [Epub ahead of print] 2015.

HY Tung, YC Su, BM Chen, PA Burnouf, WC Huang, KH Chuang, YT Yan, TL Cheng and SR Roffler*. Selective Delivery of PEGylated Compounds to Tumor Cells by anti-PEG hybrid antibodies. **Mol. Cancer Ther.** 14:1317-26, 2015.

Mousavi MZ, Chen HY, Hou HS, Chang CY, Roffler S, Wei PK, Cheng JY. Label-free detection of rare cell in human blood using gold nano slit surface plasmon resonance. **Biosensors** (Basel). 5:98-117, 2015.

Cheng TC, Chuang KH, Roffler SR, Cheng KW, Leu YL, Chuang CH, Huang CC, Kao CH, Hsieh YC, Chang LS, Cheng TL, Chen CS. Discovery of Specific Inhibitors for Intestinal E. coli β -Glucuronidase through In Silico Virtual Screening. **Scientific World Journal.** 2015 doi: 10.1155/2015/740815

M Richter, R Yumul, H Wang, K Saydaminova, M Ho, D May, A Baldessari, M Gough, C Drescher, N Urban, S Roffler, C Zubieta, D Carter, P Fender, A Lieber. Preclinical safety and efficacy studies with an affinity-enhanced epithelial junction opener and PEGylated liposomal doxorubicin. **Molecular Therapy - Methods & Clinical Development.** Published online 11 March 2015. Doi:10.1038/mtm.2015.5

Hsieh YT, Chen KC, Cheng CM, Cheng TL, Tao MH, Roffler SR*. Impediments to Enhancement of CPT-11 Anticancer Activity by E. coli Directed Beta-Glucuronidase Therapy. **PLoS One.** 2015 Feb 17;10(2):e0118028

Lin YC, Roffler SR, Yan YT, Yang RB. Disruption of Scube2 impairs endochondral bone formation. **J Bone Miner Res.**, 30:1255-67, 2015

YC Su, TC Cheng, YL Leu, SR Roffler, JY Wang, CH Chuang, CH Kao, KC Chen, HE Wang, TL Cheng. PET imaging of β -Glucuronidase activity by an activity-based ^{124}I -trapping probe for the personalized glucuronide prodrug targeted therapy. **Mol Cancer Ther.**, 13: 2852-2863, 2014.

KH Chuang, CH Kao, SR Roffler, SJ Lu, TC Cheng, YM Wang, CH Chuang, YC Hsieh, YT Wang, JY Wang, KY Weng, and TL Cheng,. Development of an anti-methoxy poly(ethylene glycol) (α -mPEG) cell-based capture system to measure mPEG and mPEGylated molecules. **Macromolecules.** 47: 6880-6888, 2014.

CH Kao, JY Wang, KH Chuang, CH Chuang, TC Cheng, YC Hsieh, YL Tseng, BM Chen, SR Roffler*, TL Cheng*. One-step mixing with humanized anti-mPEG bispecific antibody enhances tumor accumulation and therapeutic efficacy of mPEGylated nanoparticles. **Biomaterials** 35: 9930-40, 2014.

KH Chuang, YC Hsieh, IS Chiang, CH Chuang, CH Kao, TC Cheng, YT Wang, WV Lin, BM Chen, SR Roffler, MY Huang, TL Cheng. High-throughput sorting of the highest producing cell via a transiently protein-anchored system. **PLoS One** 2014 9:e102569.

YC Su, TS Al-Qaisi, HY Tung, TL Cheng, KH Chuang, BM Chen, and SR Roffler*. Mimicking the germinal center reaction in hybridoma cells to isolate temperature-selective anti-PEG antibodies. **Mabs** 6: 1069-83, 2014.

MY Wu, YC Lin, WJ Liao, CF Tu, MH Chen, SR Roffler and RB Yang. Inhibition of the plasma SCUBE1, a novel platelet adhesive protein, protects mice against thrombosis. **Arterioscler Thromb Vasc Biol.** 34:1390-1398, 2014.

CY Lai, PR Wu, SR Roffler, ST Lee, SM Hwang, SS Wang, K Wang, PC Hsieh. The Clearance Kinetics of Biomaterials Affects Stem Cell Retention and Therapeutic Efficacy. **Biomacromolecules** 15: 564-73, 2014.

ZM Prijovich, PA Burnouf and SR Roffler*. Versatile on-line SPE HPLC method for analysis of Irinotecan and its clinically relevant metabolites in biomaterials. **J. Separation Science.** 37:360-7, 2014.

YC Lin, BM Chen, WC Lu, CI Su, ZM Prijovich, WC Chung, PY Wu, KC Chen, IC Lee, TY Juan and SR Roffler*. The B7-1 cytoplasmic tail enhances intracellular transport and mammalian cell surface display of chimeric proteins in the absence of a linear ER export motif. **PLoS One**, 8(9):e75084, 2013.

TC Cheng, KH Chuang, M Chen, HE Wang, SC Tzou, YC Su, CH Chuang, CH Kao, BM Chen, LS Chang, SR Roffler*, and TL Cheng. Sensitivity of PEGylated interferon detection by anti-polyethylene glycol (PEG) antibodies depends on PEG length. **Bioconjugate Chem.**, 24: 1408-1413, 2013.

CM Cheng, FM Chen, YL Lue, SC Tzou, JY Wang, CH Kao, KW Liao, TC Cheng, CH Chuang, BM Chen, SR Roffler* and TL Cheng. Expression of beta-glucuronidase on the surface of bacteria enhances activation of glucuronide prodrugs. **Cancer Gene Ther.**, 20: 276-281, 2013.

DV Chan, R Sharma, CY Ju, SR Roffler, ST Ju. A recombinant scFv-FasLect as a targeting cytotoxic agent against human Jurkat-Ras cancer. **J. Biomed. Sci.**, 20:16, 2013.

KC Chen, K Schmuck, LF Tietze and SR Roffler. Selective cancer therapy by extracellular activation of a highly potent glycosidic duocarmycin analog. **Mol. Pharm.**, 10:1773-1782, 2013.

CH Kao, CM Cheng, KH Chuang, CH Chuang, SC Tzou, TC Cheng, YC Hsieh, KW Liao, YM Wang, LS Chang, SR Roffler, FM Chen, TL Cheng. A regularly spaced and self-revealing protein ladder for anti-tag Western blot analysis. **Anal. Biochem.**, 431: 1-3, 2012.

CP Chen, YT Hsieh, ZM Prijovich, HY Chuang, KC Chen, WC Lu, Q Tseng, YL Leu, TL Cheng, SR Roffler. ECSTASY, an adjustable membrane-tethered/soluble protein expression system for the directed evolution of mammalian proteins. **Protein Eng Des Sel.**, 25:367-375, 2012.

I Beyer, H Cao, J Persson, H Song, M Richter, Q Feng, R Yumul, R van Rensburg, Z Li, R Berenson, D Carter, S Roffler, C Drescher, A Lieber. Coadministration of epithelial junction opener JO-1 improves the efficacy and safety of chemotherapeutic drugs. **Clin. Cancer Res.**, 18:3340-3351, 2012.

TL Cheng, KH Chuan, BM Chen and SR Roffler. Analytical measurement of PEGylated molecules. **Bioconjugate Chem.**, 23: 881-899, 2012.

SH Tu , HI Huang, SI Lin, HY Liu, YP Sher, SK Chiang, P Chong, S Roffler, HW Chen, SJ Liu. A novel HLA-A2-restricted CTL epitope of tumor associated antigen L6 can inhibit tumor growth in vivo. **J. Immunother.** 35: 235-244, 2012

TC Cheng, SR Roffler, SC Tzou, KH Chuang, YC Su, CH Chuang, CS Chen, IH Harn, KY Liu, TL Cheng and YL Leu. An Activity-Based Near Infrared Glucuronide Trapping Probe for Imaging β -Glucuronidase Expression in Deep Tissues, **J. Am. Chem. Soc.**, 132:3103-3110, 2012.

WY Pan, CH Lo, CC Chen, PY Wu, SR Roffler, SK Shyue, MH Tao. Cancer immunotherapy using a membrane-bound interleukin-12 with B7-1 transmembrane and cytoplasmic domains. **Mol Ther.**, 20:927-937, 2012.

CH Chuang, KH Chuang, HE Wang, SR Roffler, SC Tzou, TC Cheng, CH Kao, SY Wu, WL Tseng, J Shiea, JM Wang and TL Cheng. In vivo positron emission topography imaging of protease activity by hydrophilic-to-hydrophobic conversion of a protease substrate. **Clin Cancer Res.**, 19: 238-247, 2012.

J Persson, I Beyer, R Yumal, Z. Li, HP Kien, SR Roffler and A Lieber. Immuno-therapy with anti-CTLA-4 antibodies in tolerized and non-tolerized tumor models. **PLoS One** 6: e22303, 2011.

KC Chen, SY Wu, YL Leu, ZM Prijovich, BM Chen, HE Wang, TL Cheng and SR Roffler*. A humanized immunoenzyme with enhanced activity for glucuronide prodrug activation in the tumor microenvironment. **Bioconjugate Chem.**, 22: 938-948, 2011.

Y Liu, S. Tuve, J Persson, I Beyer, R Yumul, ZY Li, K. Tragoolpua, KE Hellstrom, SR Roffler and A. Lieber. Adenovirus-mediated intratumoral expression of immunostimulatory proteins in combination with systemic Treg inactivation induces tumor-destructive immune responses in mouse models. **Cancer Gene Ther.**, 18: 407-418, 2011.

PT Huang, KC Chen, ZM Prijovich, TL Cheng, YL Leu and SR Roffler*. Enhancement of CPT-11 antitumor activity by adenovirus-mediated expression of β -glucuronidase in tumors. **Cancer Gene Ther.**, 18: 381-389, 2011.

YC Su, BM Chen, KH Chuang, TL Cheng and SR Roffler*. Sensitive quantification of pegylated proteins and nanoparticles by second generation anti-polyethylene glycol monoclonal antibodies. **Bioconjugate Chem.** 21: 1264-1270, 2010.

KH Chuang, HE Wang, TC Cheng, SC Tzou, WL Tseng, WC Hung, MH Tai, TK Chang, SR Roffler* and TL Cheng. Development of an universal anti-polyethylene glycol reporter gene for non-invasive imaging of PEGylated probes. **J. Nucl. Med.**, 51: 933-941, 2010.

YC Li, BM Chen, PC Wu, TL Cheng, LS Kao, MH Tao, A Lieber and SR Roffler*. Mechanical forces acting on T cells immobilized via the TCR complex can trigger TCR signaling. **J. Immunol. (Cutting Edge)** 184: 5959-5963, 2010.

KH Chuang, HE Wang, FM Chen, SC Tzou, CM Cheng, YC Chang, WL Tseng, J Shiea, SR Lin, JY Wang, BM Chen, SR Roffler* and TL Cheng. Endocytosis of PEGylated agents enhances cancer imaging and anti-cancer efficacy. **Mol. Cancer Ther.**, 9: 1903-1912, 2010.

Chuang KH, Tzou SC, Cheng TC, Kao CH, Tseng WL, Shiea J, Liao KW, Wang YM, Chang YC, Huang BJ, Wu CJ, Chu PY, Roffler SR*, Cheng TL. Measurement of poly(ethylene glycol) by cell-based anti-poly(ethylene glycol) ELISA. **Anal Chem.**, 82:2355-62, 2010.

Chang CM, Lo CH, Shih YM, Chen Y, Wu PY, Tsuneyama K, Roffler S, Tao MH. Treatment of hepatocellular carcinoma with adeno-associated virus encoding interleukin-15 superagonist. **Hum Gene Ther.**, 21: 611-621, 2010.

T Jung, D Castellana, P Klingbeil, IC Hernández, M Vitacolonna, DJ Orlicky, SR Roffler, P Brodt and M Zöller. CD44v6 dependence of premetastatic niche preparation by exosomes. **Neoplasia** 11:1093-105, 2009.

SC Tzou, S Roffler, KH Chuang, HP Yeh, CH Kao, YC Su, CM Cheng, WL Tseng, J Shiea, KW Cheng, BM Chen, TL Cheng and HE Wang. Micro-PET imaging of β -glucuronidase activity by the hydrophobic conversion of a glucuronide probe. **Radiology**, 252: 754-762, 2009.

SJ Shieh, FC Chou, PN Yu, WC Lin, DM Chang, SR Roffler, HK Sytwu. Transgenic expression of single-chain anti-CTLA-4 Fv on beta cells protects nonobese diabetic mice from autoimmune diabetes. **J Immunol.** 183(4):2277-85, 2009.

TY Juan, SR Roffler*, HS Hou, SM Huang, KC Chen, YL Leu, ZM Prijovich, CP Yu, CC Wu, GH Sun and TL Cha. Antiangiogenesis targeting tumor microenvironment synergizes glucuronide prodrug antitumor activity. **Clinical Cancer Res.**, 15:4600-4611, 2009.

S Tuve, Y Liu, K. Tragoolpua, JD Jacobs, RC Yumul, ZY Li, R Strauss, KE Hellström, ML Disis, S Roffler and A Lieber. *In situ* adenovirus vaccination engages T effector cells against cancer. **Vaccine** 27: 4225-4239, 2009.

ZM Prijovich, KC Chen, SR Roffler*. Local enzymatic hydrolysis of an endogenously-generated metabolite can enhance CPT-11 anti-cancer efficacy. **Mol Cancer Ther.**, 8:940-946, 2009.

CH Lee, YH Chiang, SE Chang, CL Chong, BM Chen and SR Roffler*. Tumor-localized ligation of CD3 and CD28 with systemic regulatory T cell depletion induces potent innate and adaptive antitumor responses. **Clin Cancer Res.**, 15:2756-2766, 2009.

CM Cheng, PY Chu, KH Chuang, SR Roffler, CH Kao, WL Tseng, J Shiea, WD Chang, YC Su, BM Chen, YM Wang and TL Cheng. Hapten-derivatized nanoparticle targeting and imaging of gene expression by multimodality imaging systems. **Cancer Gene Ther.**, 16: 83-90, 2009.

KC Chen, CH Wu, CY Chang, WC Lu, Q Tseng, ZM Prijovich, W Schechinger, YC Liaw, YL Leu, Roffler SR*. Directed evolution of a lysosomal enzyme with enhanced activity at neutral pH by mammalian cell-surface display. **Chem Biol.** 15:1277-86, 2008. (SCI = 6.523, rank = 32/283)

H Wang, Y Liu, Z Li, S Tuve, D Stone, O Kalyushniy, D Shayakhmetov, CL Verlinde, T Stehle, J McVey, A Baker, KW Peng, S Roffler, A Lieber. In vitro and in vivo properties of adenovirus vectors with increased affinity to CD46. **J. Virol.**, 82: 10567-79, 2008. (SCI = 5.150, rank = 4/30)

TL Cheng and SR Roffler*. Membrane-tethered proteins for basic research, imaging and therapy. **Med Res Rev.**, 28: 885-928, 2008. (SCI = 8.656, rank = 8/237)

Cheng CM, Lu YL, Chuang KH, Hung WC, Shiea J, Su YC, Kao CH, Chen BM, Roffler S, Cheng TL. Tumor-targeting prodrug-activating bacteria for cancer therapy. **Cancer Gene Ther.**, 15:393-401, 2008. (SCI = 3.126, rank = 26/93)

H Wang, YC Liaw, D Stone, O Kalyuzhniy, I Amiraslanov, S Tuve, CL Verlinde, D Shayakhmetov, T Stehle, S Roffler, A Lieber. Identification of CD46 Binding Sites within the Adenovirus Serotype 35 Fiber Knob. **J Virol.**, 81:12785-92, 2007. (SCI = 5.150, rank = 4/30)

S Tuve, BM Chen, Y Liu, TL Cheng, P Toure, PS Sow, Q Feng, N Kiviat, S Ni, ZY Li, SR Roffler*, A Lieber. Combination of tumor-site located CTLA-4 blockade and systemic regulatory T cell depletion induces anti-tumor immunity but not autoimmunity. **Cancer Res.** 67:5929-39, 2007. (SCI = 7.543, rank = 13/166)

P Volná, J Jarjour, S Baxter, RJ Monnat, BL Stoddard, SR Roffler, AM Scharenberg. Flow cytometric analysis of DNA binding and cleavage by cell surface-displayed homing endonucleases. **Nucleic Acids Res.** 35:2748-58, 2007. (SCI = 7.479, rank = 27/283)

YC Su, KH Chuang, YM Wang, CM Cheng, SR Lin, JY Wang, JJ Hwang, BM Chen, KC Chen, SR Roffler* and TL Cheng. Gene expression imaging by membrane-anchored enzymatic catalysis of a fluorescent probe. **Gene Ther.**, 14:565-74, 2007. (SCI = 4.745, rank = 16/152)

KC Chen, TL Cheng, YL Leu, ZM Prijovich, CH Chuang, BM Chen and SR Roffler*. Membrane-localized activation of glucuronide prodrugs by β -glucuronidase enzymes. **Cancer Gene Ther.** 14:187-200, 2007. (SCI = 3.126, rank = 26/93)

ZM Prijovich, YL Leu and SR Roffler*. Effect of pH and human serum albumin on the cytotoxicity of a glucuronide prodrug of 9-aminocamptothecin. **Cancer Chemother. Pharmacol.**, 60:7-17, 2007. (SCI = 2.645, rank = 76/166)

KH Chuang, CM Cheng, SR Roffler, YL Lu, SR Lin, JY Wang, WS Tzou, YC Su, BM Chen and TL Cheng. Combination cancer therapy by hapten-targeted prodrug-activating enzymes and cytokines. **Bioconjugate Chem.**, 17: 707-714, 2006. (SCI = 4.350, rank = 7/57)

D Kiewlich, J Zhang, C Gross, W Xia, RR Cobb, S Biroc, JM Gu, T Sato, DR Light, T Heitner, J Willuda, D Vogel, F Monteclaro, A Citkowicz, SR Roffler and DA Zajchowski. Anti-EphA2 Antibodies Decrease EphA2 Protein Levels in Murine CT26 Colorectal and Human MDA-231 Breast Tumors But Do Not Inhibit Tumor Growth. **Neoplasia** 8:18-30, 2006 (SCI = 5.025, rank = 26/166)

AB Liu and SR Roffler. Anti-CTLA4 scFv, a single-chain antibody, protects the expression of E. coli beta-galactosidase during repeated intramuscular injections in immune-competent mice. **Tzu Chi Med J.**, 18: 259-265, 2006.

SR Roffler, HE Wang, HM Yu, WD Chang, CM Cheng, YL Lu, BM Chen and TL Cheng. A membrane antibody receptor for noninvasive imaging of gene expression. **Gene Ther.** 13:412-20, 2006 (SCI = 4.745, rank = 16/152)

MH Yu, SR Roffler and BM Chen. Topoisomerase I activity in ovarian cancer is a predictor of sensitivity to topotecan chemotherapy – an exciting preliminary finding. **Taiwan Gynecol. Oncol.**, 2:14-22, 2005.

TL Cheng, CM Cheng, BM Chen, DA Tsao, KH Chuang, SW Hsiao, YH Lin and SR Roffler*. Monoclonal antibody-based quantitation of poly(ethylene glycol)-derivatized proteins, liposomes, and nanoparticles. **Bioconj. Chem.**, 16:1225-31, 2005.

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YP Sher, JY Shih, PC Yang, SR Roffler, YW Chu, CW Wu, CL Yu and K. Peck. Prognosis of non-small cell lung cancer patients by detecting circulating cancer cells in the peripheral blood with multiple marker genes. **Clin. Cancer Res.**, 11:173-179, 2005.

CJ Chang, KF Tai, SR Roffler and LH Hwang. The immunization site of cytokine-secreting tumor cell vaccines influences the trafficking of tumor-specific T lymphocytes and antitumor efficacy against regional tumors. **J Immunol.**, 173: 6025-32, 2004.

AB Liu and SR Roffler. Anti-CTLA4 scFv, a single-chain antibody, can prolong expression of *Escherichia. coli*. beta-galactosidase in immune-competent mice. **Tzu Chi Med J.**, 16: 25-31, 2004.

FH Chang, CH Lee, MT Chen, CC Kuo, YL Chiang, CY Hang and SR Roffler. Surflection: a new platform for transfected cell arrays. **Nucleic Acids Res.**, 32:e33, 2004.

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SR Roffler. Anti-PEG Antibodies for the Detection and Targeting of PEGylated Proteins and Stealth Medicines. Bilateral Workshop on Nanoscience and Nanotechnology. The Hebrew University of Jerusalem, Israel. February 26, 2015

SR Roffler. Detection and targeted delivery of PEGylated proteins and stealth nanomedicines. Tzu-Chi University. December 2, 2014.

SR Roffler. Immune-checkpoint inhibitor antibodies for cancer therapy. 2014 Formosan Medical Association Annual Meeting. Taipei, November 8-9, 2014.

SR Roffler. Bispecific Antibody Targeting of PEGylated Medicines. The 15th IUBMB – 24th FAOBMB-TSBMB Conference. Biochemistry and Molecular Biology in Transition: from Basic to Translational. Taipei, October 21-26, 2014

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SR Roffler. Mammalian cell display of antibodies and enzymes. Department of Zoology, National Taiwan University, Taiwan, April 9, 2004.

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Meetings and Abstracts

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M. Z. Mousavi, H.Y. Chen, H.S. Hou, Y.Y. Chang, S. Roffler, P.K. Wei, J.Y. Cheng. Detection of rare cells in human blood using gold nanoslits-SPR. 4th International Conference on Bio-Sensing Technology. Libson, Portugal, May 10-13, 2015.

MZ Mousavi, HY Chen, SH Wu, HS Hou, KL Lee, SR Roffler, PK Wei, JY Cheng. Magnetic Nanoparticle Enhanced Capturing and Detection of Cancer Cells in Human Blood using Gold Nanoslits SPR. Advances in Microfluidics & Nanofluidics, Taipei, 2014.

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