

Publications:

Phage display library construction and screening related references:

1. KellyeCung (2014) Microscale BioMEMS & Nanoscale Biomimesis : A dissertation presented to the faculty of Princeton University in candidacy for the degree of doctor of philosophy Department of Chemical and Biological Engineering.
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(<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4224584/>)
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4. Kellye Cung, Booyeon J. Han, Thanh D. Nguyen, Sheng Mao, Yao-Wen Yeh, Shiyou Xu, Rajesh R. Naik, Gerald Poirier, Nan Yao, Prashant K. Purohit, and Michael C. McAlpine (2013) Biotemplated Synthesis of PZT Nanowires . **Nano Letters**. (2013) 13, 6197-6202.
Link: cdn-pubs.acs.org/doi/suppl/10.1021/nl4035708/suppl_file/nl4035708_si_001.pdf
5. Muscle gene Therapy: Methods and Protocols. **Methods in Molecular Biology** 709. Ed. Dongshen Duan. Cold Spring Harbor Press.
Note: in vitro ligand synthesis
6. Generation of Chicken scFv library against Alternaria allergen extract, screening against allergen extract and antibody characterization (**Awarded by FDA, award no. HHSF223201410228A**).
(<https://govtribe.com/contract/award/hhsf223201410228a>).

Summary:

Rx Biosciences constructed scFv library using bone marrow and spleen from immunized chicken. The library was screened using a cocktail of antigens present in micro-quantities in chicken feed. Twenty unique antibodies were isolated, cloned in pET25b, expressed and purified. Purified antibodies were further characterized by rP ELISA and Biacore. The antibodies were used in multiplex ELISA.

7. Construction of **bi-specific** mouse TER119 scFv recombinant monoclonal antibody maturation, screening using mRBCs and antibody characterization (**Awarded by DOD, award no. W81XHW-14-P-0615**).
(Link: <https://govtribe.com/contract/award/w81xwh14p0615>)

Summary:

TER119/Ly76 scFv antibody was constructed on the basis of sequences available in antibody data base. CDR regions were randomized using a proprietary strategy and unique degenerate nucleotides. Randomized scFv library was screened using mouse RBC as target. Five high affinity antibodies were identified and characterized.

8. Construction of mosquito sporozoites cDNA phage display library in T7 vector (Awarded by

Summary:

T7 phage displaying mosquito sporozoites specific cDNA was prepared and characterized.

(<http://government-contracts.insidegov.com/l/9746902/HHSN272201600053P>)

9. Construction, screening and characterization of IgGA1 and IgGA2 conventional Fab and scFv Libraries from immunized llama (**Shire Pharmaceuticals**).

Summary:

Two antibody libraries, scFv and Fab, were prepared from PBMCs isolated from immunized llama. rProtein, cell based and flowcytometry based biopanning was performed. 48 clones, positive by cell based and recombinant protein assays and flowcytometry were delivered. Final 10 clones were expressed, purified and further validated by above methods.

10. Construction of lambda light chain specific human scFv phage display antibody libraries (**Elstar Therapeutics**).

11. Construction of kappa light chain specific human scFv yeast display libraries (**Elstar Therapeutics**).

12. Human scFv library construction and screening (**Elstar Therapeutics**).

13. Construction of human scFv library for HIV neutralization (**Vanderbilt University**).

14. Affinity maturation of a provided human antibody by CDR randomization, library construction, biopanning and characterization of affinity matured clones by ELISA and Biacore. (**MorNuco**)

15. CDR 3 size selected IgNAR V nanobody library production (Qty 10) containing randomized CDRs of different lengths (8 to 18 amino acids) (**Ossianix**).

16. Qazi A. Hamid (2018) New Antigen Receptor (NARV) Nanobodies: New Promise for Therapeutic Antibodies. Science Documents Volume 01, Issue. 01, January 2018.

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17. IgNARV nanobody library to isolate binders for glycosylated protein targets (**Glycobia**).

Normalized and subtracted cDNA library construction and screening related references:

18. Sigma Chemical Company (2011) Mission® Target ID Library for Human miRNA Target ID and Discovery. Biowire Fall 2011.
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(https://www.sigmaaldrich.com/content/dam/sigmaaldrich/docs/SigmaAldrich/General_Information/1/biowire_fall_2011.pdf).
20. Sigma-Aldrich Chemical Company [Coussens, M. J., Forbes, K., Kreader, C., Sago, J., Cupp, C., Swarthout, J.] (2012) Genome-wide Screen for miRNA Targets Using the MISSION Target ID Library. *J. Vis. Exp.*: 62, e3303, doi: 10.3791/3303).
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21. Sarah Lemer, Denis Saulnier, Yannick Gueguen and Serge Planes(2015) Identification of genes associated with shell color in the black-lipped pearl oyster, *Pinctadamargaritifera*. *BMC Genomics*. 2015; 16(1): 568. (<http://bmcgenomics.biomedcentral.com/articles/10.1186/s12864-015-1776-x>)
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23. Ryan S. Schwarz, Raymond H. Fetterer, George H. Rosenberg, and Katarzyna B. Miska (2010) Coccidian Merozoite Transcriptome Analysis from *Eimeria maxima* in Comparison to *Eimeriatenella* and *Eimeriaacervulina*. *Journal of Parasitology*: 96, (1) 49-57.
File:///C:/Users/qazihamid/Downloads/IND44351066.pdf
24. Li,R., Links,M.G., Gjetvaj,B., Sharpe,A. and Hannoufa, A. (2008) Development of an *Adonis aestivalis* expressed sequence tag population as a resource for genes of the carotenoid pathway. *Genome*: 51, (11), 888-896. Category: EST Library
(<http://www.ncbi.nlm.nih.gov/pubmed/18956021>)
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related proteins in arabidopsis thaliana. Thesis: Texas A & M University, USA. Normalized cDNA library in Yeast two-hybrid system
(Link: <http://oaktrust.library.tamu.edu/bitstream/handle/1969.1/ETD-TAMU-1238/JASTI-THESIS.pdf?sequence=1>) acknowledged as Virotech International, former name of Rx Biosciences.

26. DhananjayNaik ,Anik L. Dhanaraj, Rajeev Arora , Lisa J. Rowland (2007) Identification of genes associated with cold acclimation in blueberry (*Vacciniumcorymbosum* L.) using a subtractive hybridization approach. *Plant Science*: 173: 213-222.
(<file:///C:/Users/qazihamid/Downloads/63.pdf>)
27. Dilip Kumar Lakshman,NadimAlkharouf,Daniel P. Roberts,Savithiry S. Natarajan,andAmitavaMitra (2012) Gene expression profiling of the plant pathogenic basidiomycetous fungus *Rhizoctoniasolani* AG 4 reveals putative virulence factors. *Mycologia* July 2010, 11-226. Category: Normalized cDNA Library
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Link: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3157885/>
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(https://www.researchgate.net/profile/Claudio_Di_Vaio/publication/248381444_Attilo_Co convegno_Nazionale_dell'Olio_e_dell'Olio/links/0c96051de85e58c54e000000/Attilo-del-I-Convegno-Nazionale-dell'Olio-e-dell'Olio.pdf#page=96) (cDNA Library)
30. Methadone Blockade of Cardiac Inward Rectifier K⁺ Current Augments Membrane Instability and Amplifies U Waves on Surface ECGs: A Translational Study
Michael G. Klein, Mori J. Krantz, Naheed Fatima, Ashlie Watters, Dayan Colon-Sanchez, Robert M. Geiger, Robert E. Goldstein, Soroosh Solhjoo, Philip S. Mehler, Thomas P. Flagg and Mark C. Haringey (Jun 2022) **Journal of the American Heart Association**. 2022; 11: e023482
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BAC and cosmid/fosmid genomic DNA library construction and screening related references:

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<http://onlinelibrary.wiley.com/doi/10.1111/mec.13299/full>
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Category: Custom BAC Library-Construction and Screening
<http://bmcgenomics.biomedcentral.com/articles/10.1186/1471-2164-14-75>
34. Tom Martin, Ann-Christin Rönnerberg-Wästljung, Jan Stenlid, Berit Samils (2016) Identification of a Differentially Expressed TIRNBS-LRR Gene in a Major QTL Associated to Leaf Rust Resistance in *Salix*. *PLOS ONE* DOI:10.1371/journal.pone.0168776 December 21, 2016
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35. Cloning and exploitation of a Functional R-GENE FROM SOLANUM X EDINENSE. Patent Filed.
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(Link: <http://elib.suub.uni-bremen.de/edocs/00102124-1.pdf>)
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Category: Custom BAC library Construction & screening

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43. 4. A functional selection reveals previously undetected anti-phage defence systems in the *E. coli* pangenome Christopher N. Vassallo, Christopher R. Doering, Megan L. Littlehale, Gabriella I. C. Teodoro & Michael T. Laub. (2022) **Nature Microbiology**, volume 7, 1568–1579.
Category: Fosmid library construction
44. Two wrongs make a right: heat stress reversion of a male-sterile *Brassica napus* line Petra Schuhmann, Carina Engstler, Kai Klöpfer, Irene L Gügel, Amine Abbadi, Felix Dreyer, Gunhild Leckband, Bettina Bölter, Franz Hagn, Jürgen Soll (2022) **Journal of Experimental Botany**, **73**, 11, 3531–3551, <https://doi.org/10.1093/jxb/erac082> (<https://academic.oup.com/jxb/article/73/11/3531/6539845>)
Category: Next Generation Sequencing
45. Mapping the landscape of anti-phage defense mechanisms in the *E. coli* pangenome Christopher Vassallo, Christopher Doering, Megan L. Littlehale, Gabriella Teodoro, Michael T. Laub doi: <https://doi.org/10.1101/2022.05.12.491691> (<https://www.biorxiv.org/content/10.1101/2022.05.12.491691v1.abstract>) (<https://www.biorxiv.org/content/10.1101/2022.05.12.491691v1.full.pdf>)
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References acknowledging our products:

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<https://doi.org/10.1371/journal.pone.0279681>

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(<https://pubs.rsc.org/en/content/articlelanding/2019/ra/c9ra03102b#!divAbstract>) Product
57. Competitive probes for engineering signal generation: Patent
(<https://patents.google.com/patent/US20190233882A1/en>)
58. Lucas Clayton Wheeler (2017) Evolution of metal and peptide binding in the S100 protein: Ph.D. Dissertation, University of Oregon
59. **Some government issued awards and purchase orders:**
- | | | |
|-------------|--|-----------------------------------|
| Sep 19 2014 | Medical Command (DOD - Army) | Purchase Order W81XWH14P0615 |
| Sep 04 2014 | Food and Drug Administration (HHS) | Purchase Order HHSF223201410228A |
| Aug 13 2013 | National Institutes of Health (HHS) | Purchase Order HHSN272201300849P |
| Sep 22 2010 | Northeast Area (USDA - ARS - FRIID) | Purchase Order AG2328PO10A0113 |
| Aug 17 2009 | Pacific West Area (USDA - ARS - FRIID) | Purchase Order AG81J8PO9SH01 |
| Aug 21 2008 | Southeast Area (USDA - ARS - FRIID) | Purchase Order AG4431P08HV144 |
| Jan 23 2008 | Northeast Area (USDA - ARS - FRIID) | Purchase Order AG3K47P080023 |
| Aug 20 2007 | Northeast Area (USDA - ARS - FRIID) | Purchase Order AG3K84P07HS033 |
| Mar 05 2007 | Northeast Area (USDA - ARS - FRIID) | Purchase Order AG3K843K84JWCC7395 |

Presentations:

60. Therapeutic antibodies: Technology, applications and future prospects. Keynote lecture at 5th International Conference on Food and Neurocognitive Diseases, Sultan Qaboos University. November 29-30, 2016.
61. Engineering Antibodies in Therapeutics and Diagnostics. Keynote lecture at 4th International Conference on Food and Neurocognitive Diseases, Sultan Qaboos University. November 29-30, 2016.
62. New Frontiers in Phage Display Technology: From Drug Discovery to Delivery. Keynote Lecture at 2nd International Conference on Food and Neurocognitive Diseases, Sultan Qaboos University. December 10, 2014.