

3年間の米国留学で学んだこと

静岡県立総合病院 乳腺外科 松沼 亮一



海外留学のイメージ

- 行ってはみたいけど自分には関係ない ×
- 留学すれば英語は自然に身につく ×
- 1年もすれば外国人と対等に議論でき **TOEIC 満点!!** ×
- 研究留学より臨床留学 △
- たくさんの外国人の **en!!** 合いができる △
- お金は何とかなる △
- 屁理屈が多い ×
- 研究留学から帰ってきたばかりの人は臨床能力が... ○



いつ留学しようと思ったか

大学院に行くまで留学しようとは思わなかった



- 自分の周りで大学院卒業後に留学する人が増えていった。
- 彼らのほとんどは基礎研究で留学していた。
- 乳がん診療においても基礎医学の知識はますます要求されている。
- 日本の乳がん研究は欧米よりもかなりの周回遅れという現実。
- 海外留学の後押しをしてくれた。

→機会があるのであれば、挑戦してみようと思った。

留学先を決める

自分でもいくつかアプライしたがことごとくリジェクト

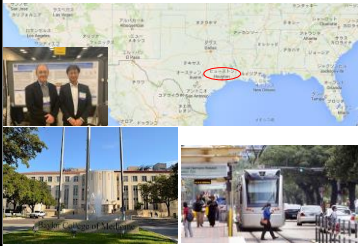
→C.A.はまずはCVを送って言われCVを送ったが、SABCSでおまは誰だという感じであり実際ポジションもないとのこと。
→A.S.は乳腺外科の知り合いに紹介するということがあったがその方も無理無理という返事。
→C.P.はポジションがないと一発リジェクト。
などなど...



タイミングが合わない難しい。そもそも英語のレベルで敬遠されがち

プロテオゲノミクスの分野で著名なEllis先生のところにアプライしてみたいと遠田先生に相談したところ、「ああ、Matthew Ellisなら昼飯一緒に食べたことあるよ。メールしてみるよ。」と！！
実際、Ellis先生もたまに人が敬しかったみたいで自分でお金を持つてくならいいよという条件で受け入れてくれた。

Baylor College of Medicine, Matthew Ellis lab



2014年7月からスタート



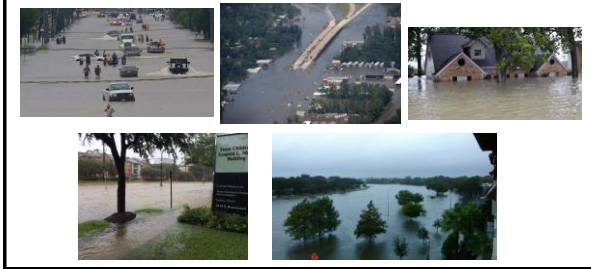
Houston Astros champion parade

Congratulations, Houston Astros!
Our hometown heroes have #EarnedHistory and are World Series Champions for the first time in franchise history! This is a memorable moment for our city and a time to celebrate, especially after the challenges Houston has faced over the past several months.
In honor of our World Champions, and to allow our parents, students, and staff to enjoy the festivities and parade, **all HISD schools and district offices will be closed on Friday, November 3, 2017.** This decision was also made because we anticipate heavy traffic and congestion surrounding our schools during afternoon dismissal times. Let's help our city celebrate! We are #HoustonStrong and we are #HISDStrong.

Sincerely,
HISD Superintendent



Hurricane Harveyでの洪水



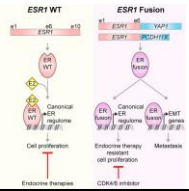
Publications from Ellis lab

- Haricharan S *et al.* Mammary Ductal Environment is Necessary for Faithful Maintenance of Estrogen Signaling in ER(+) Breast Cancer. *Cancer Cell*. 2016 March 14;29(3):249-50.
- Haricharan S *et al.* Loss of MuttL Disrupts Chk2-dependent Cell Cycle Control Through CDK4/6 to Promote Intrinsic Endocrine Therapy Resistance in Primary Breast Cancer. *Cancer Discov*. 2017 October;7(10):1-16.
- Lei JT *et al.* Functional Annotation of ESR1 Gene Fusions in Estrogen Receptor-Positive Breast Cancer. *Cell Rep*. 2018.
- Anurag M *et al.* Comprehensive Profiling of DNA Repair Defects in Breast Cancer Identifies a Novel Class of Endocrine Therapy Resistance Drivers. *Clin Cancer Res*. 2018 Oct 1;24(19):4887-4899.
- Anurag M *et al.* The prognostic effects of somatic mutations in ER-positive breast cancer. *Nat Commun*. 2018 Sep 4;9(1):3476.
- Matsumuma R *et al.* DPYSL3 modulates mitosis, migration, and epithelial-to-mesenchymal transition in claudin-low breast cancer. *Proceedings of the National Academy of Sciences*. 2018 Nov.

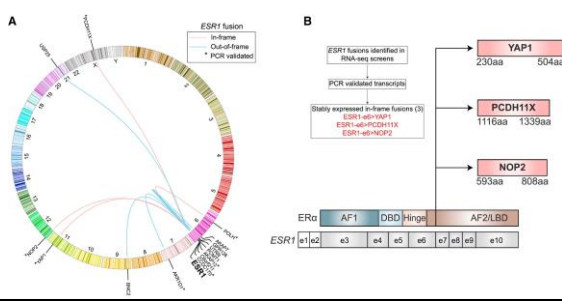


Functional Annotation of ESR1 Gene Fusions in Estrogen Receptor-Positive Breast Cancer

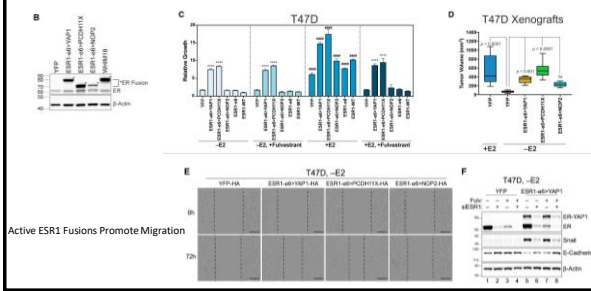
Jonathan T. Lee^{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100}, David W. Cho^{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100}, Minshu Li^{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100}, ...



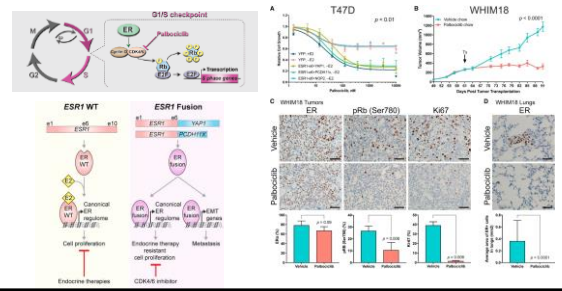
Identification and Verification of ESR1 Fusions

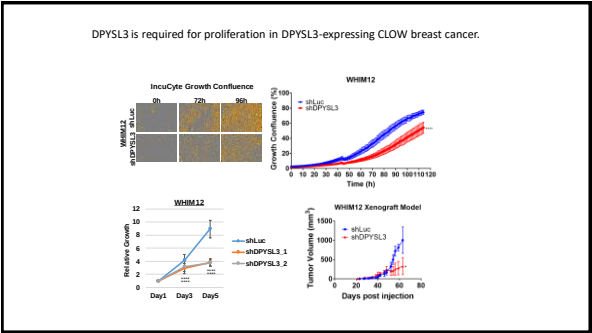
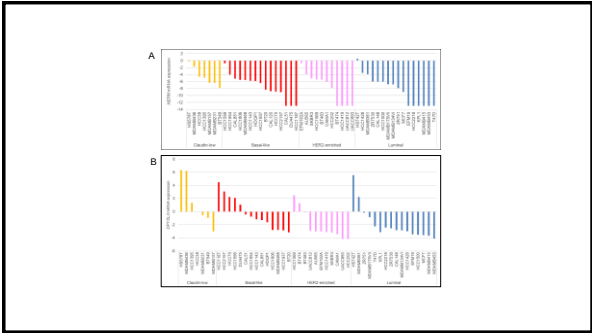
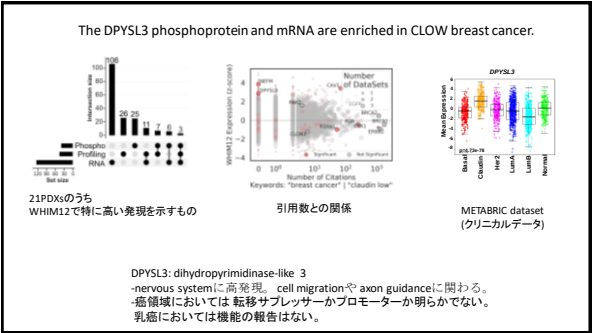
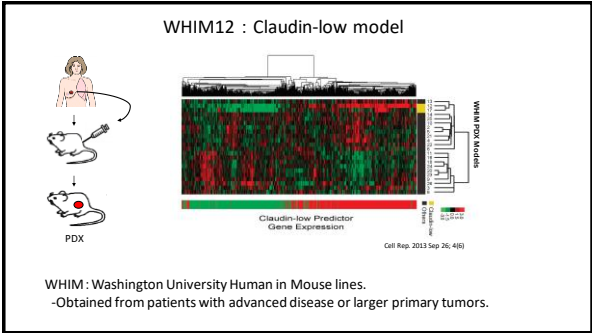
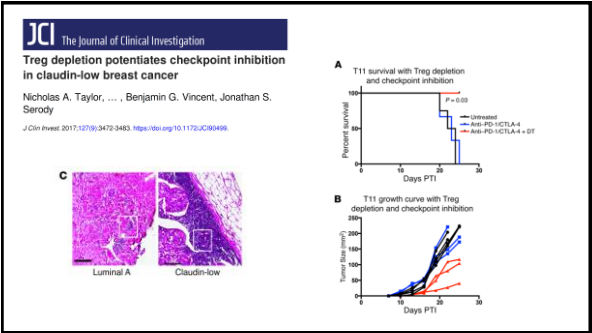
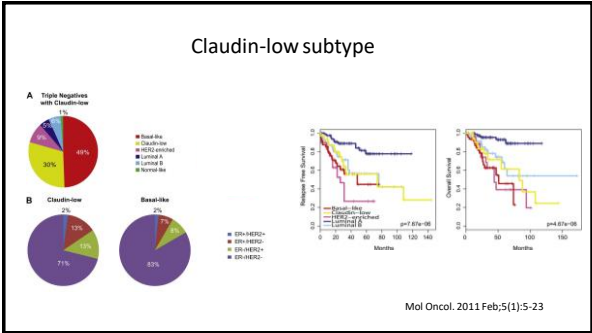


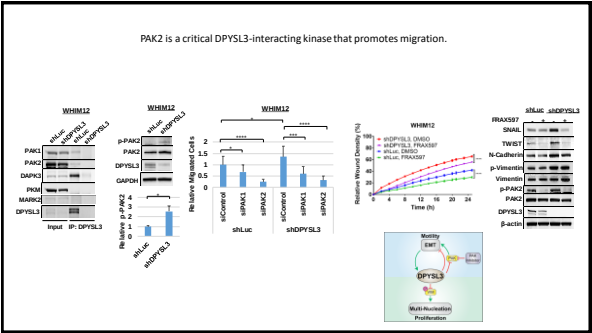
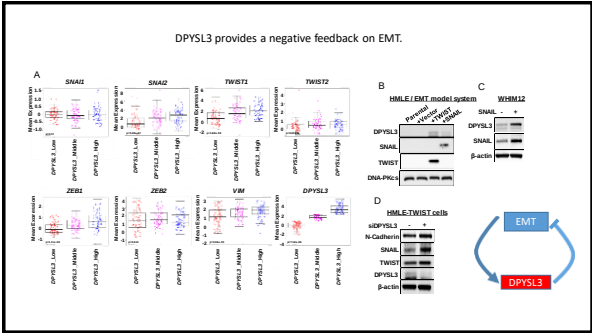
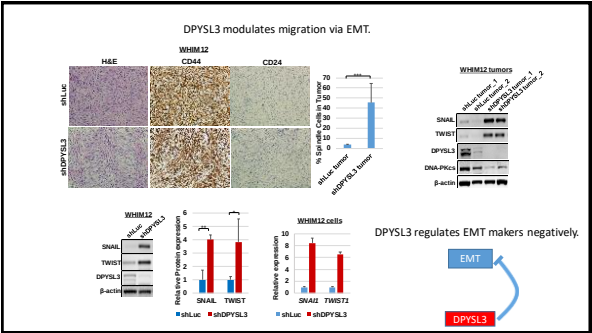
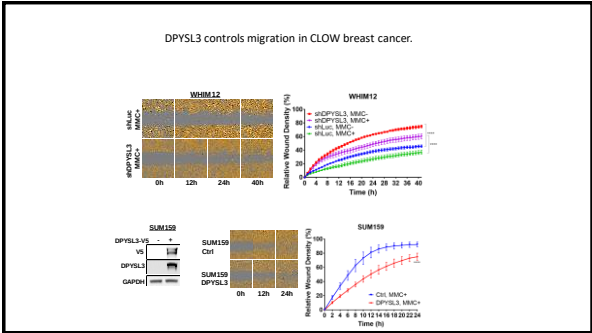
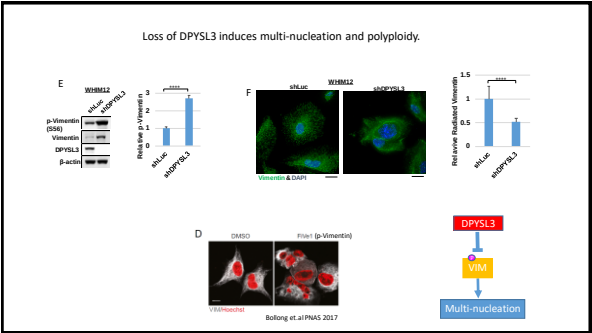
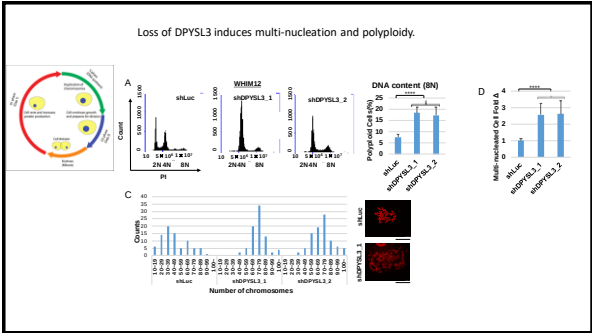
In-Frame ESR1 Fusions Confer Estrogen-Independent and Fulvestrant-Resistant Growth



Growth Driven by ESR1 Fusions Can Be Suppressed with CDK4/6 Inhibitor Treatment







Acknowledgements

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CAPES

