

EAA Andrology Training Centre
Centre Report

2022



Centre identification

Center for Men's Health,
The Lundquist Institute at Harbor-UCLA Medical Center,
Division of Endocrinology, Department of Medicine, Harbor-UCLA Medical Center,
1124 W. Carson Street,
Torrance,
CA 90502, USA.



CENTRE REPORT

History of Centre

The Center of Men's Health (Harbor-UCLA Male Reproductive Research Center) was established in 1973 under the current director Professor Ronald Swerdloff. It is located at The Lundquist Institute at the Harbor-UCLA Medical Center. All faculty of the center are faculty of the David Geffen School of Medicine at UCLA. Harbor-UCLA Medical Center, a public hospital serving the indigent population of the South Bay of Los Angeles County, includes the hospital and clinics (both operated by the Los Angeles County Department of Health Services) along with research facilities under the auspices of The Lundquist Institute. Covered under the Center umbrella is the National Institute of Child Health and Human Development funded Contraceptive Clinical Trial Network Center (CCTN) in the Male area and National Male Reproductive Epigenomics Center. The training of Andrology in the United States is not clearly defined and generally takes place in the Division of Urology or the Division of Endocrinology. Andrology unlike Obstetrics and Gynecology is not a recognized sub-specialty and there is no formal program of training or accreditation by the American Society of Andrology or any other accreditation committee. The Center of Men's Health under the direction of Dr. Swerdloff specializes in the training of both basic and clinical andrologists. Andrology is within the Division of Endocrinology and Metabolism and an Andrology Clinic was established in 2014 with participation of urology faculty providing specialized patient care and teaching of trainees by an andrologist and a urologist. The clinical trainees include medical students, rotating medical residents, visiting scientists and endocrinology post-doctoral fellows that complete clinical training in two years after which they are eligible to be board certified in Endocrinology. The clinical trainees can stay on for extra years for research training. Basic research training includes doctoral students, and post-doctoral trainees. Research focuses development of male contraceptives, androgen replacement, development of ocular cohesive tomography for detection of occult sperm in non-obstructive azoospermia, sleep and androgen metabolism, regulation of spermatogenesis, mitochondrial derived peptides and germ cell apoptosis, cilia dyskinesia, non-hormonal male contraception, male reproductive epigenomics and epigenetic inheritance.

Organization of Centre

The Center of Men's Health (Andrology Center) is directed by Professor Ronald Swerdloff, MD (Past President of the American Society of Andrology (ASA); Recipient of the ASA Distinguished Andrology Award and Endocrine Society Laureate Distinguished Educator Award) . He is assisted by the co-director, Professor Christina Wang, MD (Past President of ASA; Past President, Past Secretary of the International Society of Andrology, ISA; Past chair, and member of the World Health Organization Task Force/Research Group on the Regulation of Male Fertility; Recipient of the Distinguished Andrology Award and Distinguished Service Award from the ASA). They led the Andrology development at our campus and have trained many andrologists from around the world. Dr. Swerdloff is the chief of Endocrinology responsible for administration of the Division and plays a leadership role shared with the director of the training program in endocrinology. He is the Director of the Center for Men's health and the Contraceptive Clinical Trials Network center (CCTN). Dr. Wang is the Medical Director of the Endocrine and Metabolic Research Laboratory (A State and Federal Certified Laboratory), Site Director of the Clinical and Translational Science Institute at The Lundquist, and Principal Investigator of the CCTN male contraceptive trials. Together Dr. Swerdloff and Wang is responsible for clinical research studies in male reproduction (usually have 5 to 10 concurrent studies) and supervised four endocrinology trainees, three research coordinators, a research scientist (Dr. Yanhe Lue) and 5 laboratory technologists and a data management consultant.

Professor Wei Yan, MD, PhD (Recipient of the ASA Young Investigators award, Past Program Chair of ASA Annual meeting and North American Testis Workshop; Past Editor-in-Chief of Biology of Reproduction and recipient of the Society for the Study of Reproduction Outstanding Research Award) is the PI of the NICHD funded Program Grant "Center of Male Reproductive Epigenomics" and several NICHD funded Investigator-Initiated grants. His laboratory has a senior scientist H. Zhang, MD, PhD; three post-doctoral fellow and a PhD

student.

Professor Peter Liu, MD, PhD (Current President of the International Society of Andrology, Recipient of the ASA and ISA Young investigators award) is responsible for studies on impact of sleep on hormone and cardiometabolic health. He is also part of the male contraceptive development group.

Please see **Organization Chart** for other members of the center.

Educational activities

Clinical Training: The trainees include medical students, residents, fellows and visiting scholars. Didactics include weekly translational endocrinology conference, journal club, didactic series on reproduction, Harbor-UCLA- City of Hope Medical Center Joint Research Conference. Training in Andrology Clinic with Andrologists (Professors Swerdloff, Wang or Liu) and Urologists Professor Jacob Rajfer or Dr. Sriram Eleswarapu). The clinic is a teaching clinic where each patient with an andrology, sexual dysfunction or infertility problem is discussed with an endocrine and a urology fellow with all the physicians in the room. The collaboration between endocrinology and urology provides the foundation of training that enhances the curriculum with professionalism and sensitivity in the care of andrology patients and families; familiarity with contemporary andrological literature and clinical practice guidelines from professional societies; and participation in clinical or basic science research activities in any aspect of male reproductive and sexual medicine. The trainees that are interested in Andrology learn how to do semen analyses using the WHO Laboratory Manual for the Examination and Processing of Human Semen and attends the 4 modules from the Endocrine Society on Hormone Assays including Module 1: Importance of hormone measurements and assay standardization; Module 2: Hormone types and characteristics and features of an ideal assay; Module 3: Methods used to measure hormones and validation/judging the quality of an assay; and Module 4: Factors affecting the interpretation of hormone concentrations specifically for use in diagnosing endocrine disorders. Trainees are required to

complete Laboratory hands on experience for at least a week; with weekly discussions on assays as relevant; and group discussions with Dr. Wang /Swerdloff on laboratory methods. The trainees are required to take in responsible conduct of research, protecting human participants, and training in harassment and discrimination.

Research Training: The trainees include high school students, undergraduate and graduate students and post-doctoral fellows. The basic research training occurs mainly in the Laboratory of Dr. Yan and Dr. Lue. The didactics include the Epigenomics Center seminars with external speakers, weekly laboratory meetings, training session for the Lundquist PhD program and the summer fellowship program. The Epigenomics Center faculty including collaborators at University of California Riverside and University of Texas San Antonio, is responsible for providing eight didactic sessions for the Summer High School Student Fellowship program and 6 teaching sessions for PhD students on reproduction and genetic and epigenetic inheritance. Supervised laboratory training is provided by Drs. Yan, Lue, and Zheng.

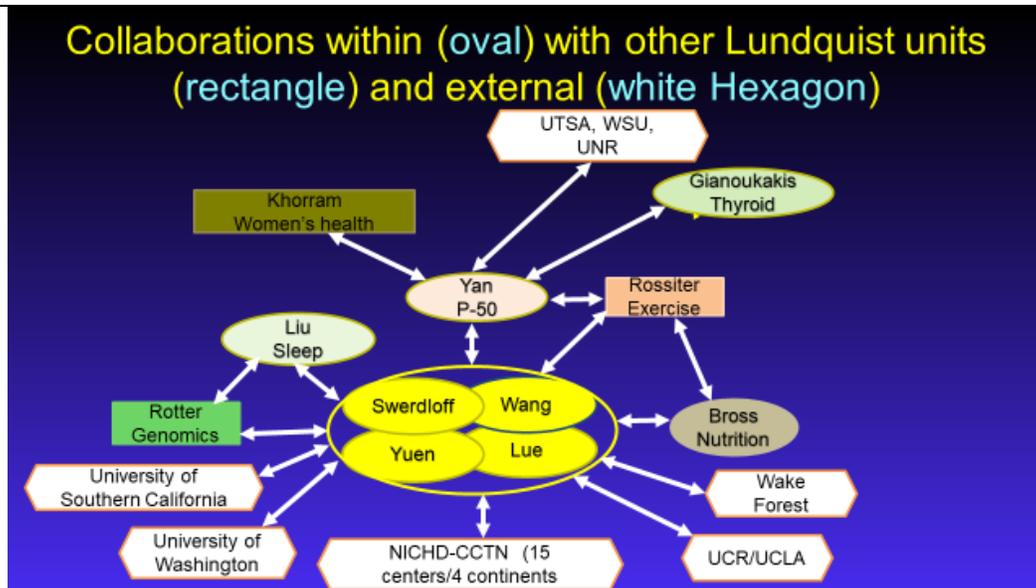
Former selected trainees include: Shalendar Bhasin (USA), Rebecca Sokol (USA), David Handelsman (Australia), Peter Liu (formerly from Australia, now at Lundquist), Nestor Gonzalez-Cadavid (formerly from Venezuela, now at The Lundquist), Krista Erkkila (Finland), Jonas Ceponis and Indre Ceponiene (Lithuania), K.K Lee and Jason Ng (Hong Kong), Prasanth Surampudi (USA), Jaixin Xing (China) among many others. Current Trainees include: Junior faculty, Fiona Yuen, MD, MS PhD candidate; Fellows: Waleed Butt, Jerry Han, Haeseung Lee, Prativa Rajbhandari; Post-Doctoral Fellows: Kyle Wang, PhD, Hetan Wang, MD, PhD, Sheng Chen, MD, PhD; and Ph D candidate Hayden McSwiggin.

Research activities

The primary purpose of the Center is to enhance collaboration within the Center members, and with members of other departments at The Lundquist as well as expanding collaborations to other institutions within the US, EAA and throughout the world. In this regard, we have been successful in recruiting Wei Yan, MD, PhD by the Endocrinology (Andrology) team of Swerdloff and Wang resulted in the successful

application of a P-50 grant and the establishment of a NIH, NICHD funded National Male Reproductive Epigenomics Center on The Lundquist Campus in 2020. The Epigenomics Center was moved to The Lundquist from University of Nevada Reno and Professor John McCarrey (University of Texas, San Antonio) and Assistant Professor Qi Chen (University of California, Riverside) were integrated across institutions. Drs. Wang and Swerdloff wrote the clinical project and the projects of Drs. Yan and McCarrey were matched with the clinical project in many aspects. Dr. Wang led the community outreach and education project for the P-50 center grant. A pilot project on Semen Microbiome in response to changes in exercise and nutrition was successfully funded as a pilot grant to Fiona Yuen MD, MS, PhD candidate at The Lundquist Institute and a UCLA Instructor in Medicine within the Epigenomic P-50 Center. Rachele Bross PhD (Bionutritionist at The Lundquist) was integrated for the clinical nutrition portion and Dr. Harry Rossiter Research Director of the Pulmonary and Exercise Physiology led the exercise portion of the clinical project. Dr. Yan worked with Dr. Rossiter on a separate successful NIH RO1 grant (Investigator initiated grant funded by NIH) and with Dr. Khorram from Division of Reproductive Endocrinology on another R01 grant on leiomyoma. Dr. Yan has multiple other collaborations locally, nationally, and internationally including a collaboration with Dr. M. Skinner at Washington State University and Dr. McCarrey on transgenerational transmission of Epigenomic Modulations of Genetic Traits. His large cadre of post-doctoral fellows include many from international institutions. He has strong ties to many Chinese research Institutions growing list of collaborators in many prestigious institutions in China (**See Collaboration Figure**).

Drs. Swerdloff and Wang continued to collaborate with Dr. Budoff on androgens and cardiac-metabolic- reproductive projects and Drs. Budoff. Drs. Swerdloff, Wang and their senior research fellow and now junior faculty member Dr. Fiona Yuen collaborated with Dr. J Rotter on genetic assessment of changes in outcomes of The T Trial (Peter Snyder PI at U. Penn). Dr. C. Wang (PI of multiple NICHD competitive contracts through the Lundquist Contraceptive Clinical Trial Network Centers (R Swerdloff Center Director) are leading an international study on combined androgen-progestin gel for male contraception. The study sites other than The Lundquist



include the University of Washington co-lead site (S. Page, MD, PhD) and 13 other sub-sites in four continents. The Contraceptive Clinical Trials Network NICHD funding (C. Wang, R. Swerdloff) was renewed for seven additional years during the report period window. Dr. B. Nguyen (Gynecology/ Family Planning at the University of Southern California) was added as a new collaborator to The Lundquist NICHD program bringing new strength to studies on attitudes and needs for male contraception and expertise of a gynecologist in couples' studies. Dr. Wang's hormone and semen measurement laboratory (Endocrine and Metabolic Research Laboratories) continued in an increasing role as Lue, Wang and Swerdloff have developed (through funding by NICHD) new sensitive techniques for study participants home self-assessment of azoospermia and very low sperm counts (oligozoospermia). This Laboratory functions as the central laboratory of all the NICHD funded Male Contraceptive Clinical Trial Network studies and participates in many other studies on environmental effects of pre-natal hormones on the offspring. Drs. Swerdloff, Lue and Wang collaborating with Dr. Park in Bio-engineering at UC Riverside received a NICHD STIR grant and spin off a company to develop a new patented Ocular Cohesive Tomography technology as a non-invasive means of finding occult sperm in the testes of azoospermic infertile patients. Lue and his colleagues are also collaborating with the Institute of Regenerative Medicine at Wake Forest on a project on developing testis organoids for XXY mice and boys. Dr. Peter

Liu leads research on sleep and endocrinology. He participates in the contraceptive studies and collaborates with many Dr. Rotter's team from the Genomics IWI as well in investigators in other outside investigators including Dr. Veldhuis at the Mayo Clinic and Dr. Iranmanesh at the University of Virginia.

Clinical activities

The patients with andrological problems are seen at the Medical Center's Andrology, Endocrine, Pituitary, Diabetes, Pediatric Endocrinology, Urology and Reproductive Endocrinology Clinics. The Andrology clinic staffed by Andrologists and Urologists is a consultation and teaching clinic. This is where patient seen in other clinic will receive an expert opinion on androgen replacement, sexual dysfunction, and male infertility. Patients with hypogonadism are generally seen and investigated in the Endocrine clinic where approximately 5% of patients have male hypogonadism, infertility and transsexualism. Most of the patients in our Diabetic Clinic have Type 2 diabetes and about 20 % of these have male hypogonadism or erectile dysfunction. Patients with hypogonadism associated with pituitary and hypothalamic problems are investigated and treated in the Pituitary Clinic where about 25 to 35% of the patients have male hypogonadotropic hypogonadism due to pituitary tumors. The Medical Center will support the use of gonadotropins for induction of spermatogenesis with special medication request and justification for a limited number of patients. The hormone analyses for these patients are performed by the Medical Center's Clinical Chemistry Department and most of the specialized tests are sent out to Reference Laboratories. Patients with ambiguous genitalia, cryptorchidism, and micropenis, delayed or precocious puberty are referred to the Pediatric Endocrine Clinic running on the same days as the adult clinics. Harbor-UCLA Medical center has a multidisciplinary transgender medicine group where patients requiring psychological, endocrine or surgical therapy are triaged and directed to the sub-specialty clinics. In the urology clinic (Chief of Urology, Dr. Blumberg) about 7 to 10 % of the subjects present with erectile and sexual dysfunction, hypogonadism, and male infertility. In addition, Dr.

Rajfer and Eleswarapu performs testicular microdissection and sperm extraction from testis for approximately 40 to 50 patients per year with male infertility through their clinics at UCLA but not at The Lundquist Institute at Harbor-UCLA. The infertile couple is usually initially investigated in the Reproductive Endocrinology Clinic (Chief of Reproductive Endocrinology, Dr. Khorram). Because infertility treatment is not covered by insurance and the government sponsored MediCare and MediCal programs in California, patients seen in our public medical clinics have no additional resource and little access to infertility diagnosis and treatment. The Medical Center supports ovulation induction by clomiphene and a very limited ovulation induction with gonadotropins by special request. Thus the wide range of male infertility, genetics of male infertility and ART investigations and treatment are not available through the Medical Center and performed through the private clinics of Drs. Swerdloff, Rajfer and Khorram. The Center's Andrology Laboratory supports semen analyses and preparation of samples for IUI for these private clinics. IVF and ICSI and testicular extraction or epididymal aspiration of sperm are not performed on campus but in associated ART clinics (Dr. Khorram and Rajfer).

Name and address of Centre

The Lundquist Institute at Harbor-UCLA Medical Center,
 Division of Endocrinology, Department of Medicine, Harbor-UCLA Medical Center,
 1124 W. Carson Street,
 Torrance,
 CA 90502, USA

Type of Centre

University
 University Hospital
 Private Centre

Other (please
 specify)

Research Institute in an Academic Hospital. Faculty are UCLA
 Faculty

1. Director

Ronald Swerdloff MD

Academician Affiliated Member Clinical Andrologist

2a. Clinical responsible

Christina Wang, MD

Academician Affiliated Member Clinical Andrologist

2b. Clinical responsible

Peter Lue, MD, PhD

Academician Affiliated Member Clinical Andrologist

2c. Clinical responsible

Jacob Rajfer, MD at UCLA

Academician Affiliated Member Clinical Andrologist

2. Clinical responsible

Sriram Eleswarapu, MD, PhD at UCLA

Academician Affiliated Member Clinical Andrologist

3. Scientists

1) Name Wei Yan
 Degree MD, PhD
 Specialty Epigenetic Inheritance

Academician Affiliated Member Clinical Andrologist

2) Name Yanhe Lue
 Degree MD
 Specialty Regulation of spermatogenesis

Academician Affiliated Member Clinical Andrologist

3) Name Huili Zhang
 Degree MD, PhD
 Specialty Male reproductive epigenetics

Insert any additional staff below (if required)

MD/Biologists/Chemists

1) Name Fiona Yuen
 Degree MD, MS
 Specialty Andrology/Endocrinology
 Full time/part time Full time

Academician Affiliated Member Clinical Andrologist

2) Name Waleed Butt
 Degree MBBS
 Specialty Endocrinology trainee
 Full time/part time Full time

Academician Affiliated Member Clinical Andrologist

3) Name Haeseung Lee
 Degree MD
 Specialty Endocrinology trainee
 Full time/part time Full time

Academician Affiliated Member Clinical Andrologist

4) Name Jerry Han
 Degree MD
 Specialty Endocrinology trainee
 Full time/part time Full time

Academician Affiliated Member Clinical Andrologist

5) Name Prativa Rajbhandari
 Degree MD
 Specialty Endocrinology trainee
 Full time/part time Full time

Academician Affiliated Member Clinical Andrologist

6) Name Kyle Zhuqing Wang
 Degree PhD
 Specialty Male Reproduction
 Full time/part time Full time

Academician Affiliated Member Clinical Andrologist

7) Name Hetan Wang
 Degree MD, PhD
 Specialty Male Reproduction
 Full time/part time Full time

Academician Affiliated Member Clinical Andrologist

8) Name Sheng Chen
 Degree MD, PhD
 Specialty Male Reproduction
 Full time/part time Full time

Academician Affiliated Member Clinical Andrologist

9) Name Hayden McSwiggin
 Degree BS
 Specialty Male Reproduction
 Full time/part time Full time

Academician Affiliated Member Clinical Andrologist

Insert any additional staff below (if required)

Specialists

1) Name Jacob Rajfer, MD, Urologist
 2) Name Sriram Eleswarapu, MD, PhD Urologist
 3) Name Laura Hull MBA Data Management Consultant
 4) Name _____
 5) Name _____

PhD Students

1) Name _____

2) Name _____
3) Name _____

Nurses/coordinators

1) Name Xiaodan Han
2) Name Elizabeth Ruiz
3) Name Michael Massone

Laboratory Technicians

1) Name Sima Baravarian, PhD
2) Name Maria Lajoie
3) Name Kimberly Hernandez

Administrative Personnel

1) Name Janicia ng
2) Name _____
3) Name _____

4. Clinical Activity

A. Outpatients: Consultations per year in the last 3 years

	2019	2020	2021
Endocrinology and Diabetes	4698	5009	5440
Pituitary	793	667	674
Andrology	352	284	296

Type of andrological patients in the last years (%) in Andrology/Endocrine/Pituitary	2019	2020	2021
Infertility	7	6	10
Erectile dysfunction	27	34	32
Hypogonadotropic Hypogonadism	26	20	25
Klinefelter	23	28	23
Gynaecomastia	10	7	2
Varicocele			
Cryptorchidism			
Male sex accessory gland infections			
Testicular tumours			
Disorders of gender identity	7	5	8

B. Ultrasound (testis, penile, prostate) *

	2019	2020	2021
Total	NA	NA	NA
Controls			

* performed at the Department of Radiology

C. Andrological surgery procedures (Drs. Rajfer and Eleswarapu)

	2019	2020	2021
Testicular biopsies	0	0	1
Micro-Testicular extraction of sperm	12	14	13
Varicocele ligation	0	0	0
Prostate biopsies	0	0	0
BPH	70	72	72
Prostate cancer	0	0	0
Vasectomy	40	20	20
Vaso-vasostomy	0	0	0
Other			

5. A. Andrology laboratory activity

	2019	2020	2021
Semen analyses	808	714	765
Sperm preparation swim up	20	45	60
Seminal markers			

5. B. Andrology laboratory activity

Sperm banking donors Yes No Sperm banking cancer patients Yes No

If yes:

	2017	2018	2019
Number of samples			

5. C. Histopathological evaluation of biopsies Yes No 5. D. Reproductive Hormones Assays Yes No

	2019	2020	2021
testosterone	2775	3880	3969
Free testosterone (Equilibrium dialysis)	0	1055	0
SHBG	983	1347	3357
FSH	1973	1471	2274
LH	1386	1636	2040
DHT	2017	2028	100
Estradiol	793	2-48	437

5. E. Y chromosome microdeletions according to EAA/EMQN guidelines Yes No **If yes** number of tests in the past year _____Participation to the EAA quality control scheme? Yes No **If no**, specify if available in another lab of the same hospital Yes No Blood karyotyping Yes No **If no**, specify if available in another lab of the same hospital Yes No

Other genetic tests (please specify)
 FISH sperm
 Pre-implantation genetic diagnosis
 No

6. Collaborations with other Clinical Units of the University/Hospital

IVF Unit Yes No

If yes please specify: Children, Endocrinology, IVF, Urology, Genetics, Pathology

Urology Clinic Yes No

Endocrine Clinic Yes No

Genetics Lab/Unit Yes No

Paediatric Unit Yes No

Central Hospital Laboratory Yes No

Private Centres Yes No

If yes please specify:

Dr. Khorram's private clinic

7. Clinical teaching activity

Duration of training (years):

	Number
A: Trainees in the last five years	7
B: Trainees who passed EAA-ESAU\exam for Clinical Andrologist in the last 5 yrs	NA
C: Trainees working in the centre preparing to pass the EAA-ESAU examination	NA
D: PhD Students	2
E: Medical Students	4
F: Other students (MSc) high school	45

8. Formal Andrology teaching program Yes No

If yes: specify duration (years/months): Years Months

	Hours of formal teaching per year	Professional training (weeks/months)
Medical Students	30 hours	4 weeks

PhD Students	400 hours	
Post Graduate basic students		12 months
Trainees Clinical Post-doctoral	200 hours	Three months consult service Three half day clinics per week.
Other degrees (please specify		

9. Research Activity (maximum 1 page)

The full list of publications (years 2018 to 2021) are presented at the end of this report.

Male Contraception Development, Androgens Replacement

Thirumalai A, Ceponis J, Amory JK, Swerdloff R, Surampudi V, Liu PY, Bremner WJ, Harvey E, Bliethe DL, Lee MS, Hull L, Wang C*, Page ST. Effects of 28 Days of Oral Dimethandrolone Undecanoate in Healthy Men: A Prototype Male Pill. *J Clin Endocrinol Metab.* 2019;104(2):423-32.

Wu S, Yuen F, Swerdloff RS, Pak Y, Thirumalai A, Liu PY, Amory JK, Bai F, Hull L, Bliethe DL, Anawalt BD, Parman T, Kim K, Lee MS, Bremner WJ, Page ST, Wang C*. Safety and Pharmacokinetics of Single-Dose Novel Oral Androgen 11beta- Methyl-19-Nortestosterone-17beta-Dodecylcarbonate in Men. *The Journal of clinical endocrinology and metabolism.* 2019;104(3):629-38

Swerdloff RS, Wang C, White WB, Kaminetsky J, Gittelman MC, Longstreth JA, Dudley RE, Danoff TM. A New Oral Testosterone Undecanoate Formulation Restores Testosterone to Normal Concentrations in Hypogonadal Men. *The Journal of Clinical Endocrinology and Metabolism.* 2020;105(8):2515-2531.

Cilia dyskinesia, epigenetic inheritance

Yuan S, Wang Z, Peng H, Ward SM, Hennig GW, Zheng H, Yan W (2021) Oviductal motile cilia are essential for oocyte pickup, but dispensable for sperm and embryo transport. *Proceedings of the National Academy of Sciences USA* 118(22) e2102940118.

Chang Z, Qin W, Zheng H, Schegg K, Wang Y, Liu X, Han L, Peri S, McSwiggin H, Wang Z, Peng H, Yuan S, Wu J, Wang Y, Zhu S, Jiang Y, Nie H, Zhou Y, Tang Y*, Yan W* (2021) Triptonide is a reversible, nonhormonal male contraceptive agent. *Nature Communications* 12, 1253 DOI: 10.1038/s41467-021-21517-5

Yuan S, Liu Y, Peng H, Tang C, Hennig GW, Wang Z, Yu T, Klukovich R, Zhang Y, Zheng H, Hess RA, Xu C, Wu J, Yan W* (2019) Motile cilia of the male reproductive system require miR-34/miR-449 for development and function to generate luminal turbulence. *Proceedings of the National Academy of Sciences USA* 116(9):3584-3593.

Yu T, Xie Y, Tang C, Wang Y, Yuan S, Zheng H, Yan W* (2021) Maternal transmission of a paramutant phenotype requires intact DNMT2 functions in the male germline. *Biology of Reproduction.* <https://doi.org/10.1093/biolre/ioab086>

Male Germ Cell Apoptosis

Jia Y, Swerdloff RS, Lue Y, Dai-Ju J, Surampudi P, Cohen P, Wang C. The IL-27 component EBI-3 and its receptor subunit IL-27R alpha are essential for the cytoprotective action of humanin on male germ cells. *Biol Reprod.* 2021;104(3):717-30.

Sleep Endocrinology

Liu PY, Lawrence-Sidebottom D, Piotrowska K, Zhang W, Iranmanesh A, Auchus RJ, Veldhuis JD, Van Dongen HPA. Restoring testosterone and cortisol balance during sleep restriction in men improves metabolic outcomes. *J Clin Endocrinol Metab.* 2021. (accepted May 25, 2021).

this contract is for CCTN contractors to develop and design new research protocols for men and to conduct male contraceptive clinical trials.

“Clinical Evaluation of Nestorone Gel and Testosterone Gel for Male Contraception.”

PI Wang Co-I Swerdloff ,Liu

NO1 Contract HHSN275220130024I T ask Order HHSN 2750007

9/15/2015–9/14/2023

This is a phase 2b study to assess the contraceptive efficacy of a combined transdermal Nestorone and *testosterone* gel for 12 months in couples using this method as the sole protection against pregnancy. This study started recruitment in 2018.

“Injectable DMAU for Male Contraception: Safety and Tolerability, Pharmacokinetics and Pharmacodynamics of Single IM or SC DMAU Injection Dose Escalation Study in Healthy Male Volunteers “

NO1 Contract HHSN275220130024I Task Order HHSN 2750002

01/13/2014–12/31/2023 PI Wang, Co-I Swerdloff, Liu

This phase 1 study will administer single IM or SC injections of DMAU (a potential male contraceptive) in healthy men to assess safety tolerability, pharmacokinetics, and suppression of endogenous gonadotropins and sperm output in healthy men.

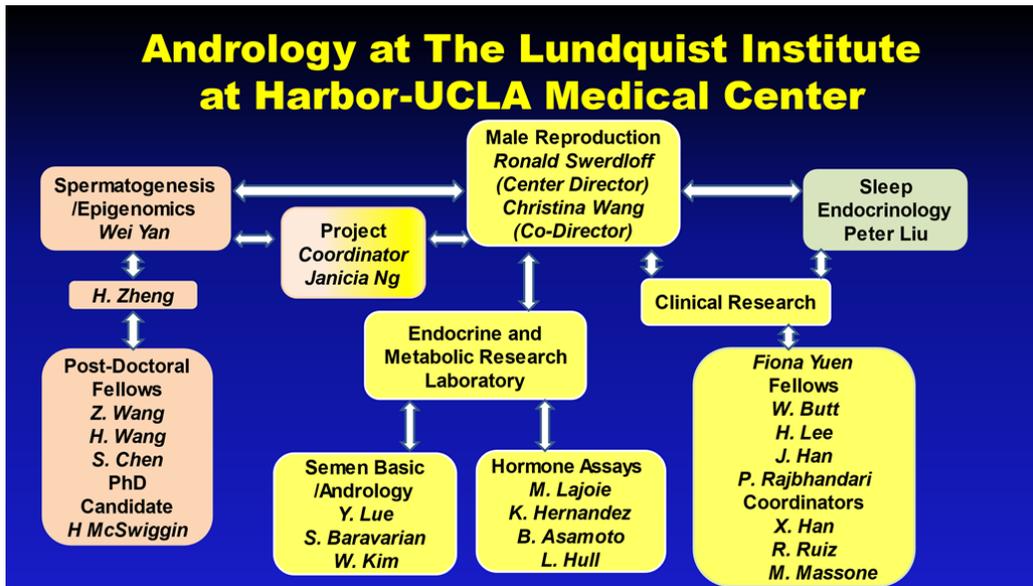
“Novel OCT Technology for Detection of Occult Sperm in the Testes in Non-Obstructed Azoospermia”

PI Swerdloff Co-I: Lue ,Wang NIH/NICHD R41 HD102275

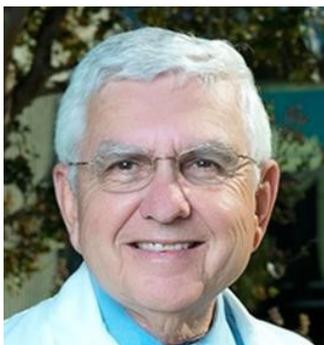
05/01/2020-4/30/2022

This project aims to develop OCT equipment to retrieve sperm in testis of men with non-obstructive azoospermia

ORGANIZATION CHARTS



CENTRE PHOTOS



Ronald Swerdloff, MD
Center Director



Christina Wang, Center
Co-Director



Wei Yan, MD, PhD
Co-Director



Peter Liu, MD, PhD
Andrologist



Yanhe Lue, MD
Scientist/Investigator



Sriram Eleswarapu
Urology at UCLA



The EAA center at The Lundquist Institute at harbor-UCLA Medical Center

FULL LIST OF PUBLICATIONS (with IF) of staff members from the last 3 years

Please use these URL links to get more recent publication of the main investigators of our center

Swerdloff

<http://www.ncbi.nlm.nih.gov/sites/myncbi/ronald.swerdloff.1/bibliography/47782158/public/?sort=date&direction=ascending>

Wang

<http://www.ncbi.nlm.nih.gov/sites/myncbi/christina.wang.2/bibliography/47778439/public/?sort=date&direction=descending>

Yan

<https://www.ncbi.nlm.nih.gov/myncbi/wei.yan.2/bibliography/public/>

Liu

<https://www.ncbi.nlm.nih.gov/sites/myncbi/peter.liu.1/bibliography/47766701/public/>

Publications are arranged in order of the appearance of the Andrology Center investigators. Duplicates are not presented under the other authors' names

Peter Liu, M.D., Ph.D.

O'Byrne NA, Yuen F, Niaz W, Liu PY. Sleep and the Testis. *Curr Opin Endocr Metab Res.* 2021 Jun;18:83-93. doi: 10.1016/j.coemr.2021.03.002. Epub 2021 Mar 11. PubMed PMID: 33937581; PubMed Central PMCID: PMC8087280.

Liu PY, Lawrence-Sidebottom D, Piotrowska K, Zhang W, Iranmanesh A, Auchus RJ, Veldhuis JD, Van Dongen HPA. Clamping Cortisol and Testosterone Mitigates the Development of Insulin Resistance during Sleep Restriction in Men. *J Clin Endocrinol Metab.* 2021 May 27;. doi: 10.1210/clinem/dgab375. [Epub ahead of print] PubMed PMID: 34043794.

Pengo MF, Steier J, Parati G. The ANDANTE Project: A Worldwide Individual Data Meta-Analysis of the Effect of Sleep Apnea Treatment on Blood Pressure. *Arch Bronconeumol.* 2021 May 10;. doi: 10.1016/j.arbres.2021.05.002. [Epub ahead of print] PubMed PMID: 34088534.

Liu PY, Irwin MR, Krueger JM, Gaddameedhi S, Van Dongen HPA. Night shift schedule alters endogenous regulation of circulating cytokines. *Neurobiol Sleep Circadian Rhythms.* 2021 May;10:100063. doi: 10.1016/j.nbscr.2021.100063. eCollection 2021 May. PubMed PMID: 33748539; PubMed Central PMCID: PMC7970107.

Mok Y, Melehan KL, Phillips CL, Yee BJ, Miller C, Grunstein RR, Bartlett D, Liu PY, Wong KK, Hoyos CM. Does CPAP treat depressive symptoms in individuals with OSA? An

analysis of two 12-week randomized sham CPAP-controlled trials. *Sleep Med.* 2020 Sep;73:11-14. doi: 10.1016/j.sleep.2020.04.021. Epub 2020 May 4. PubMed PMID: 32769027.

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