ISL&T-X
International Symposium on Ligaments and Tendons

The Chinese University of Hong Kong
HONG KONG
2010

Final Report

Submitted by ISL&T-X Planning Committee

A great meeting for all, a great victory!

Introduction

The ISL&T was founded by Prof. Savio L-Y. Woo in 2000. For the past nine years, it was organized in US annually. This year, it made the first debut in Hong Kong, a vibrant cosmopolis in Asia. The key organizer is the Department of Orthopaedics and Traumatology of The Chinese University of Hong Kong.

Inheriting the tradition, ISL&T-X continued to be the ideal global platform for idea exchange in researches on ligaments and tendons. With a varied background, the ISL&T-X also brought in innovative elements, which included a half day Associative Program, Savio Woo Young Researcher Award, Young Faculty Paper Award and the energy of the metropolis of Asia.

The internationality of ISL&T reached a new peak to have participants from 15 different countries/regions. And with the support from the co-organizers, we are proud to present you the ISL&T-X.

Two-day Program

The ISL&T-X was the first ever ISL&T meeting held outside US. Prof. KM Chan was the Planning Committee Chair while Prof. CH Chen and Prof. PPY Lui were the Program Chairs. The ISL&T-X was a two-day program. The first day was the Main Program, following the tradition of the ISL&T in the past 9 years. The second day was an Associative Program of ISL&T-X, with more emphasis on discussion, workshops as well as understanding the research and its setting in the hosting institution.

Main Program

The Main Program was divided into 6 sessions. After two opening speeches by Prof. KM Chan (The Planning Committee Chair) and Prof. Savio Woo (The founder of ISL&T), the scientific program followed in order, began with 1 or 2 session speeches by the invited speakers followed by the free paper presentations.

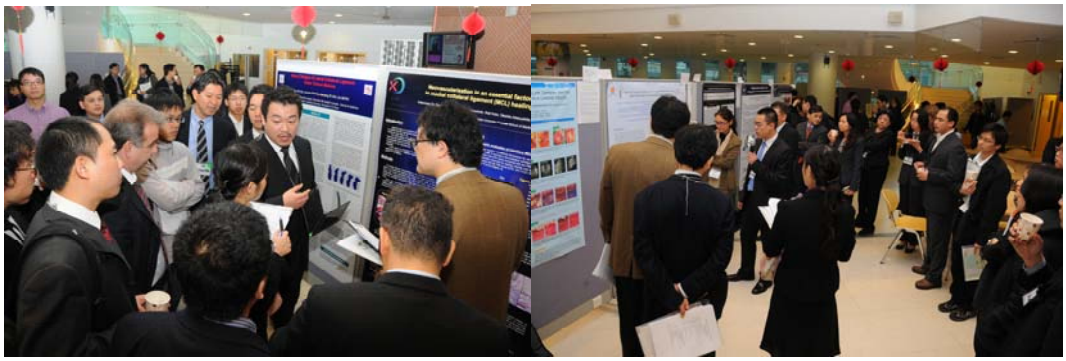
There were two tea breaks in this Main Program for poster presentations. Presenters of 9 shortlisted posters were invited to give 3-min presentation of their work followed by questions from the audience. The poster presentation sessions were

modulated by invited moderators, similar to the other free oral presentations. There were altogether 8 keynote speeches, 32 free oral presentations and 23 posters in this meeting.

In general, the ISL&T-X Main Program was well-received by the attendees, with ~130 attending the Main Program and the response from the attendees was very good. The short-coming was the program was too rushed and we ran overtime in order to allow some questions and discussion after each paper. If at all possible, more time should be given to allow more discussion and flexibility in the future.

Opening speeches by Prof. Savio L-Y. Woo and Prof. KM Chan

Heated discussion and Q/A sessions



Poster presentations with extensive interaction

Two of our keynote speakers, Prof. Masahiro Kurosaka and Prof. Rocky S. Tuan

Friendly and comfortable environment for exchanging ideas

Awards

There were 5 awards, with a total of 7 prizes in this ISL&T-X meeting. The Savio Woo Young Researcher Award (2 prizes), the Young Faculty Paper Award and one additional Best Student Paper Award were new to this meeting, due to the generous support of Flexcell International Corporation, the Asian♦American Institute for Research and Education and the Department of Orthopaedics & Traumatology, The Chinese University of Hong Kong. The winners of these awards were:

Savio Woo Young Researcher Paper Award

1. *Biological research:* **Xiao Chen**, Biological, Center for Stem Cell and Tissue Engineering, School of Medicine, Zhejiang University, China
   "Tendon-lineage Differentiation of Human Embryonic Stem Cells Induced Tendon-lineage Differentiation by Overexpression of Scleraxis and Dynamic Mechanical Stress"
2. *Clinical research:* **Saira Chaudhry**, Clinical, School of Engineering and Material Science, Queen Mary University of London, UK
   "Eccentric & Concentric Calf Muscle Loading: An In Vivo Study of Force & EMG"

Best Student Paper Award

1. **Gustav Andersson**, Department of Anatomy, Institute of Integrative Medical Biology, Umeå University, Sweden

"Tenocyte Hypercellularity and Vascular Proliferation in a Rabbit Model of Tendinopathy-Contralateral Effects Suggest the Involvement of Central Neuronal Mechanisms"

2. **Kei Saito**, Kogakuin University, Japan
   "Effects of Cyclic Tensioning Culture on a Stem Cell-Based Self Assembled Tissue (scSAT) Derived from Synovium"

Best Young Faculty Paper Award
Atsuo Nakamae, Department of Orthopaedic Surgery, Graduate School of Biomedical Science, Hiroshima University, Japan
"Biomechanical Function of Anterior Cruciate Ligament Remnants: Effects of Remnant Pattern and Duration between Injury and Surgery of Knee Stability Evaluated with a Navigation System"

Best Research Fellow paper Award
Wei Liu, Department of Plastic and Reconstructive Surgery, Shanghai 9th People's Hospital, Shanghai Jiao Tong University, China
"Mechanical Stimulation Enhances Engineered Tendon Formation In Vitro and In Vivo"

Best Poster Award
Katsumasa Tei, Department of Orthopedic Surgery, Kobe University Graduate School of Medicine
"Neovascularization is an Essential Factor in Medial Collateral Ligament (MCL) Healing"

Associative Program

The associative program of ISL&T-X was more causal. The program started with two workshops on conducting translational research for clinical and industrial needs and skills on writing papers by two-experienced mentors, followed by concurrent sessions on research forum and laboratory tour.

For the laboratory tour, the host institution led the participants to visit their vivaCT and microCT facilities for assessing tendon calcification and tunnel healing; mechanical testing system for studying the mechanical strength of biological tissues; the ultrasound imaging system for investigating the structural and vascular changes of tendon; the in vivo imaging system for longitudinal monitoring of fluorescent or chemiluminence signals in live animals; the GMP facility for clinical trials, the cell migration set-up as well as the human motion analysis system.

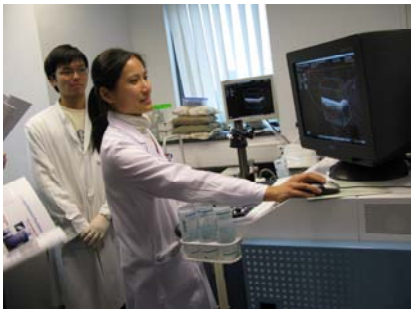
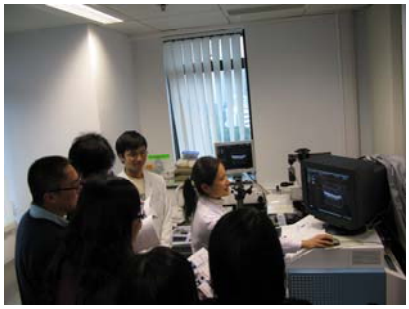
There were 4 forum topics for discussion. Each forum topic was lead by one moderator and 2-3 experts in the field, with hot debate on the controversial issues related to the topics among the moderator, experts and the attendees. There about 80 participants for the mentor's workshops while there were about 50 and 30, participants, respectively in the research form and the laboratory tour. The

associative forum was again overtime due to the overwhelming response from the attendees in discussion.

Mentor workshops by Prof. CK Cheng and Prof. Savio L-Y. Woo

Participants were attracted to the workshops.

There were rounds of heated discussions at the research forum

One of the lab-tour groups visiting the high resolution animal ultrasound imaging system

Finance

We inherited the tradition of ISL&T that all the participants contributed to the meeting in terms of paying the registration fee, which was the traditional source of the income. The organizer, Department of Orthopaedics and Traumatology of The Chinese University of Hong Kong, generously settled the rest of the expenses uncovered by the registration fee. It supported two of the five awards this year. The rental and set up of the venue were supported by the Department. And the transportation services among the conference hotel, meeting venue and banquet were also offered by the organizer. The budget of the meeting was balanced at the end.

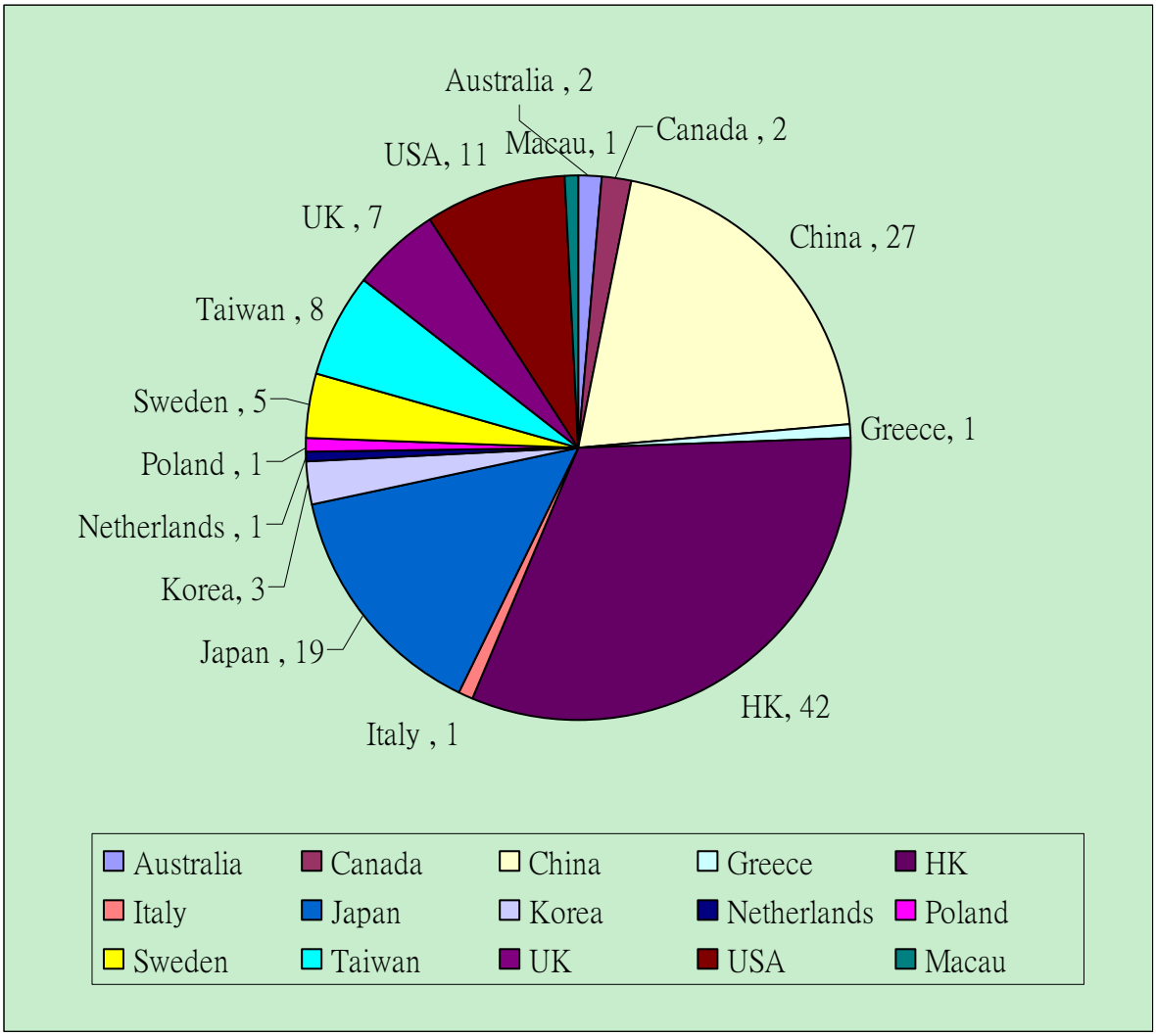
Output

Besides the annual program book, a booklet on basic team research was printed to introduce the latest researches being conducted by the organizer. Exceptionally, all the invited keynote speakers will contribute a full paper to the SMARTT Journal. This will prolong the heat of ISL&T and continue the discussions initiated in the meting. And a multi-authored paper on animal model will also be published. They are the tangible outputs of the ISL&T-X. A CD of the whole meeting will be

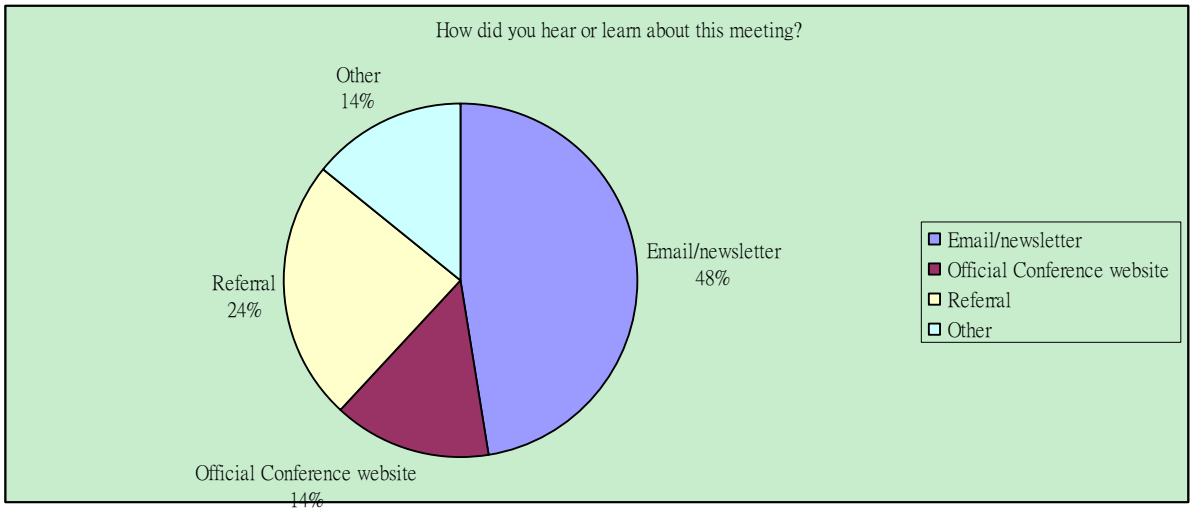
produced for the people who are interested in the proceedings. Please contact the Hong Kong Planning Committee for your own copy.

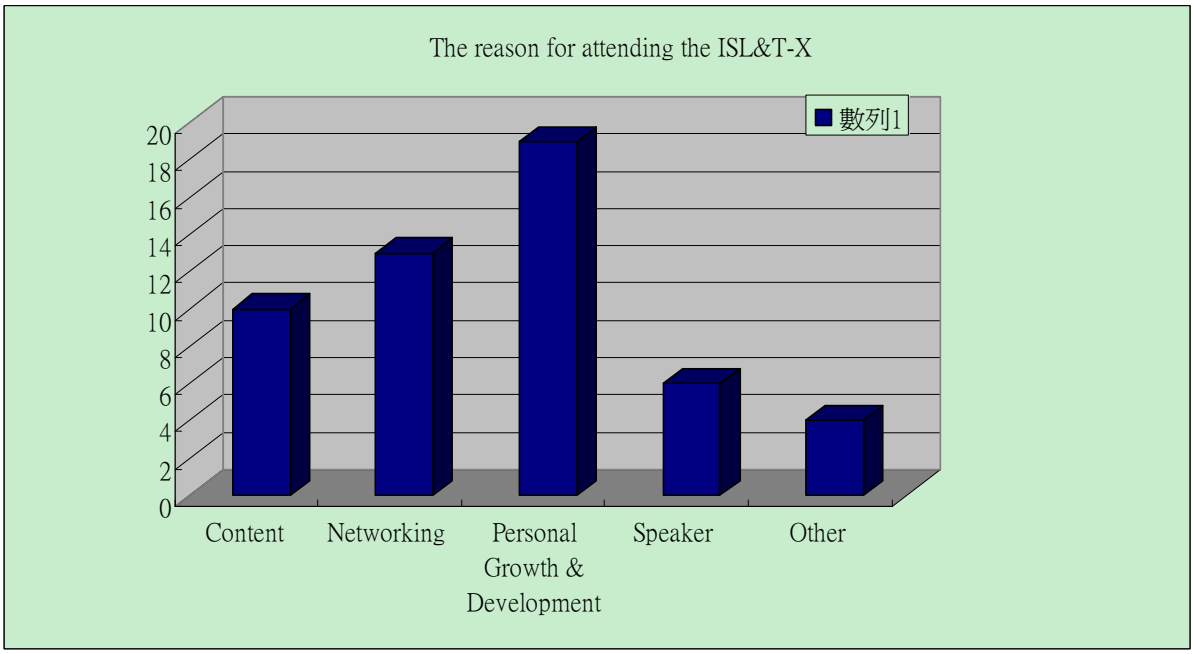
Attendees and feedbacks

Around 130 participants registered or attended the two-day ISL&T-X. They came from 15 different countries/regions as illustrated in the chart. Among them, 78% were from Asia, 12% from Europe. And Americas contributed 10%. It was indeed a very international symposium.



Questionnaire was distributed to gather the feedbacks from our participants. It was the first ISL&T for most of the participants this year. The relocation of the meeting was successful to draw the attention of participants in vicinity. The graphics visualize the questions and feedbacks.


How did you hear or learn about this meeting?
Other
14%
Email/newsletter
48%
Referral
24%
Official Conference website
14%
Email/newsletter
Official Conference website
Referral
Other


The reason for attending the ISL&T-X
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20
18
16
14
12
10
8
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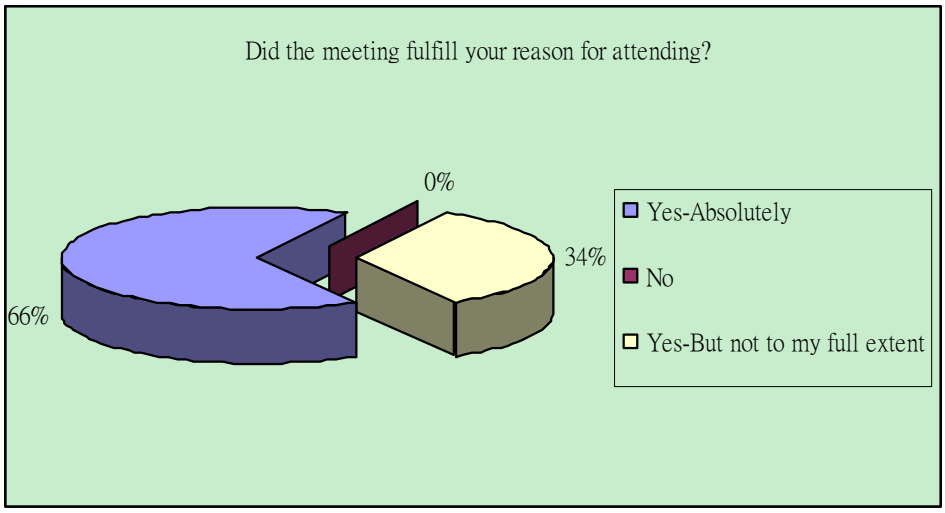
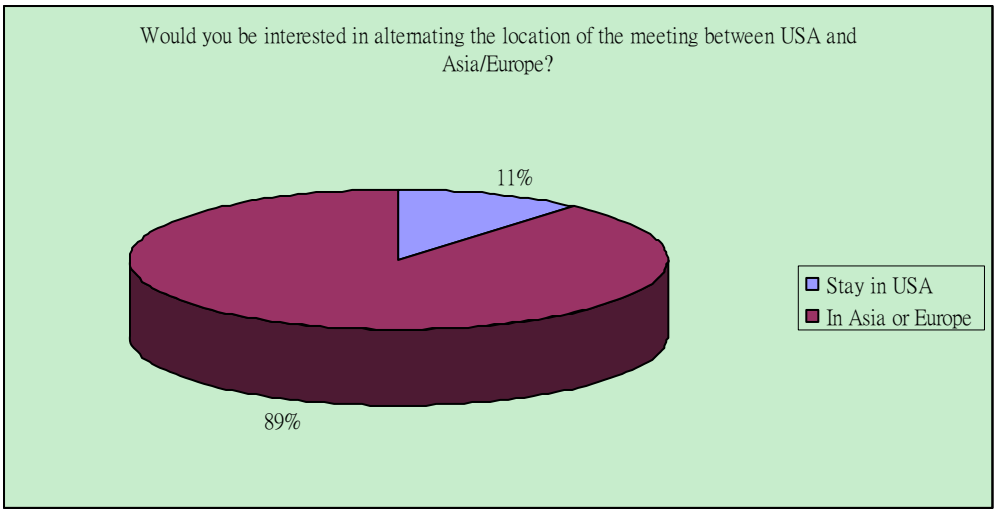
Content
Networking
Personal Growth & Development
Speaker
Other


Did the meeting fulfill your reason for attending?
0%
34%
66%
Yes-Absolutely
No
Yes-But not to my full extent



Banquet

There was a banquet on the night of the Main Program and most, if not all the registered attendees, attended the banquet. It was a great gathering for all.

Around 120 participants joined the banquet.

Left: ISL&T will stay as vibrant as the coming Chinese Lunar New year.
Right: Our Japanese friends singing at the banquet.


Left: “Leaving on a jet plane” by Prof. Woo, Mrs. Woo, Prof. Kurosaka and Prof. Chan
Right: A Shanghai dialect song by the Shanghai group

Future

The ISL&T-X 2010 hosted in Hong Kong was a tremendous success with excellent and encouraging response from the attendants. We are very proud to be given this opportunity. Hong Kong will be an attractive destination for all our international colleagues, if ISL&T would like to stage any future meetings, we are most happy to host a full ISL&T or satellite meeting whenever there is a strong request from the international fraternity.

The experience in 2010 indicated that we need more time for discussion, more practical sessions on focused topics, and an environment that facilitates debating and networking. The mentor-mentee arrangement with the posters, research forum and lab tour will also be very conducive to nurturing a new generation of research scientists and clinicians; and this can be encouraged in future ISL&T meetings.

Appendix I

ISL&T-X programs in sketch

International Symposium on Ligaments and Tendons (ISL&T-X)

Main Program- February 5, 2010
Postgraduate Education Centre
Kai Chong Tong

8:00-8:30am	Registration and Light breakfast
8:30-8:40am	Opening remarks
8:40-9:55am	Session 1: Tendinopathy-Pathogenesis and Treatment
9:55-10:25am	Break and Poster Session 1
10:25-11:25am	Session 2: Tendon Development and Tendon Cell Differentiation
11:25-12:30pm	Session 3: Translational Research for Tendons and Ligaments
12:30-1:30pm	Lunch
1:30-2:35pm	Session 4: Functional Tissue engineering and Repair of Ligaments and Tendons
2:35-3:40pm	Session 5: Tissue Mechanics
3:40-4:10pm	Break and Poster Session 2
4:10-5:45pm	Session 6: ACL reconstruction-Biology of healing and in vivo knee kinematics
5:40-5:45pm	Closing remark
6:15pm	Departure of shuttle bus to banquet venue
6:45pm	Banquet

Associative Program- February 6, 2010
4/F Li Ka Shing Medical Sciences Building
Rm 406 & Rm 407

9:15-9:45am	Mentor Group: (Rm 407) Translational Research for clinical and industry needs Cheng Kung Cheng
9:45-10:15am	Mentor Group: Skills on writing papers Savio L-Y. Woo
10:15am-12:15pm	Option A: Lab Tour (Rm 406)
10:15am-1:15pm	Option B: Research Forum (Rm 407)

Appendix II

Welcoming Note by Prof. Savio L-Y. Woo

Welcome!

It is my pleasure and honor to join Professor K.M. Chan to welcome you to Hong Kong for the Tenth International Symposium on Ligaments and Tendons (ISL&T-X)!

The first ISL&T meeting took place over a decade ago. Our mission remains to bring together researchers with diverse backgrounds to present and discuss new developments and important topics related to ligaments and tendons. This annual symposium is a place where graduate students as well as junior and senior level biologists, engineers and clinicians can exchange ideas freely, learn from one another, and establish collaborations.

As ISL&T is maturing, it is crucial for us to move onto next stage and bring the meeting outside of the U.S. and on the international stage for all to enjoy and participate. I'd like to thank Prof. Chan for taking on the challenge and bringing the first ever ISL&T to Asia. His able organizing committee has also done a wonderful job in keeping with the traditions of ISL&T. Further, they have added their own unique mark to the meeting by including an extra half-day for an education session, research and professional development, plus a special session on tendinopathy. As the ISL&T is so dear to my heart, I am truly delighted that we can have a wonderful one and a half days to be amongst good friends and colleagues.

Last year, we formed the International Advisory Committee (IAC) for ISL&T. This is a body of experts of ligaments and tendons, which has been charged to govern this organization. The IAC will develop new strategies to move the field forward, including the formation of a society as well as creating an association to a high quality international journal.

I trust that you will all enjoy the beautiful scientific program that was put together by our Program Co-Chairs, Dr. Pauline Lui and Prof. Chih-Hwa Chen. Please participate by actively sharing your ideas and new data, as well as asking a lot of questions. I also wish to congratulate all our younger colleagues who are finalists for the various awards as you are representing the best of the best! A special acknowledgement must also be given to Dr. and Mrs. Al Banes of Flexcell International for their generous support of the ISL&T awards over the years!

I'm also happy to announce that the next ISL&T meeting will take place in Long Beach, California on January 12, 2011, a day before the ORS, and our host will be Dr. Thay Lee of the University of California, Irvine. Please mark your calendar and plan to attend!

Finally, we are all very thankful for the most generous hospitality of Prof. Chan and his great team, as well as to our sponsors for their support of this meeting.

Please enjoy the day!

Savio L-Y. Woo, Ph.D., D.Sc. (Hon.), D.Eng. (Hon.)

Appendix III

Welcoming Note by Prof. Kai Ming Chan

Dear Friends and Colleagues,

Welcome to Hong Kong - our vibrant and exciting city!

We take great pride to host the ISL&T-X in Hong Kong, the very first one outside the US. This is an extraordinary honor and privilege.

I would like to thank the entire Planning Committee and International Program Committee, particularly the guidance of Prof. Savio L-Y. Woo and the able leadership of the Program Chairs, Prof. Chih Hwa Chen and Prof. Pauline Lui. We are expecting more than 120 participants from 15 countries/ regions. This is a truly international meeting with a galaxy of expertise.

The program highlights the following:

1. Tendinopathy-Pathogenesis and Treatment
2. Tendon Development and Tendon Cell Differentiation
3. Translational Research for Tendons and Ligaments
4. Functional Tissue Engineering and Repair of Ligaments and Tendons
5. Tissue Mechanics
6. ACL Reconstruction-Biology of Healing and In Vivo Knee Kinematics

Following the tradition of ISL&T, we will encourage interaction amongst the podium and poster presenters and the audience in a lively atmosphere that we hope will generate new ideas, innovations and continuing networking. We do hope that the ISL&T-X in Hong Kong will showcase a model how this initiative from the US would be radiated to the rest of the world with additional vigor. We are most excited to maintain this momentum to bring ligament and tendon research into the limelight of attention in the clinical and the research arena.

The Bone and Joint Decade 2000-2010 will be coming to a concluding chapter soon. There are intense discussions to extend the Bone and Joint Decade to a new era with different emphases and formats. Certainly with the deeper understanding of the burden of disease, the socio-economic impact, the clinical and research potential, tendon and ligament will be high on the agenda. ISL&T-X will be a major impetus in bringing it to international prominence.

With the backdrop of the coming Chinese New Year of the Tiger, we hope you will take time to enjoy the superb hospitality and the glamorous festivity around. I wish you a most enjoyable stay in Hong Kong.

Prof. KM Chan
Chair, Planning Committee, ISL&T-X

Appendix IV

Program Schedules

Main Program

February 5, 2010, Postgraduate Education Centre

Starts	Ends	Min	Code	Topics	Speakers
8:00am	8:30am	30	-	Registration and Light Breakfast	
8:30am	**8:35am**	**5**	OR1	**Opening Remark**	**Savio L-Y. Woo**
8:35am	**8:40am**	**5**	OR2	**Opening Remark**	**Kai Ming Chan**
Session 1: Tendinopathy-Pathogenesis and Treatment					**Moderators: Christer G. Rolf Roger K.W. Smith**
8:40am	8:50am	10	S1-1	Keynote Lecture: B to B in Tendinopathy, Where is the Missing Gap? (p.33)	Kai Ming Chan
8:50am	9:00am	10	S1-2	Keynote Lecture: Update of Clinical Trial on Autologous Tenocyte Therapy for Tendon Degeneration (p.34)	Paul Anderson
9:00am	9:05am	5	-	Discussion	
9:05am	9:15am	10	S1-3	Tendinopathies: Is the Ageing Cell Responsible for Reduced Tendon Matrix Turnover in Older Aged Individuals? (p.35)	Helen L. Birch
9:15am	9:20am	5	-	Discussion	
9:20am	9:30am	10	S1-4	Tenocyte Hypercellularity and Vascular Proliferation in a Rabbit Model of Tendinopathy – Contralateral Effects Suggest the Involvement of Central Neuronal Mechanisms (p.36)	Gustav Andersson *Student paper award list
9:30am	9:35am	5	-	Discussion	
9:35am	9:40am	5	S1-5	Mechanical Stretching Increased the Expression of BMP-2 which Promoted Osteogenic/Chondrogenic and Inhibited Tenogenic Differentiation of Tendon-Derived Stem Cells (TDSCS) *In Vitro* (p.37)	Yun Feng Rui *Student paper award list
9:40am	9:45am	5	S1-6	Eccentric & Concentric Calf Muscle Loading: An *In Vivo* Study of Force & EMG (p.27-32)	Saira Chaudhry *Savio Woo Young Reseracher Award winner *Student paper award list
9:45am	9:50am	5	S1-7	Efficacy of Bone-Marrow Derived Mesenchymal Progenitor Cells for Naturally-Occurring Tendinopathy in the Horse (p.38)	Roger K.W. Smith
9:50am	9:55am	5	-	Discussion	
9:55am	10:25am	30	-	**Break and Poster Session 1**	**Moderators: Masataka Deie Hirotaka Sano**

Starts	Ends	Min	Code	Topics	Speakers
Session 2: Tendon Development and Tendon Cell Differentiation					**Moderators: Catherine Kuo Pauline P.Y. Lui**
10:25am	10:40am	15	S2-1	Keynote Lecture: Overview on Current Tendon Development and Differentiation Researches (p.39)	Hong Wei Ouyang
10:40am	10:50am	10	S2-2	Tendon-lineage Differentiation of Human Embryonic Stem Cells Induced Tendon-lineage Differentiation by Overexpression of Scleraxis and Dynamic Mechanical Stress (p.24-26)	Xiao Chen *Savio Woo Young Reseracher Award winner
10:50am	10:55am	5	-	Discussion	
10:55am	11:00am	5	S2-3	Effect of GDF-6 on the Tenogenic Differentiation of Rat Bone Marrow-Derived Mesenchymal Stem Cells *In Vitro* (p.40)	Ming Ni *Student paper award list
11:00am	11:05am	5	S2-4	Tendon Stem Cells Exhibit Differential Properties from Tenocytes (p.41)	James H.C. Wang
11:05am	11:10am	5	-	Discussion	
11:10am	11:15am	5	S2-5	Control of Tendon Stem Cell Differentiation by Nano-Topography through Integrin and Myosin II Pathway (p.42)	Zi Yin
11:15am	11:20am	5	S2-6	Isolation and Characterization of Human ACL-Derived Vascular Stem Cells (p.43)	Tomoyuki Matsumoto
11:20am	11:25am	5	-	Discussion	
Session 3: Translational Research for Tendons and Ligaments					**Moderator: Gang Li Wei Hsiu Hsu**
11:25am	11:40am	15	S3-1	Keynote Lecture: Regulation of Adult Stem Cells Fate and Function in Tissue Engineering and Regeneration (p.44)	Rocky S. Tuan
11:40am	11:50am	10	S3-2	Propagation of Full-Thickness Rotator Cuff Tears - A Three-Dimensional Finite Element Analysis (p.45)	Hirotaka Sano
11:50am	11:55am	5	-	Discussion	
11:55am	12:05pm	10	S3-3	A Novel Extracellular Matrix Bioscaffold can Enhance ACL Healing (p.46)	Matthew B. Fisher
12:05pm	12:10pm	5	-	Discussion	
12:10pm	12:15pm	5	S3-4	*In Vivo* Osteogenesis of Ligamentum Flavum Cells in Photo-Responsive Hydrogel Encapsulated Bone Morphogenetic Protein-2: a Nude Mice Model (p.47)	Shu Wen Whu *Y. Faculty award & *Rs. fellow award list
12:15pm	12:20pm	5	S3-5	Does a Biomechanically Ideal Ovine Anterior Cruciate Ligament Autograft Present Early Signs of Degradation? (p.48)	May A. Chung
12:20pm	12:25pm	5	S3-6	Effect of Enamel Matrix Derivative on Tendon–Bone Interface in Anterior Cruciate Ligament Reconstruction in Rats (p.49)	Masataka Deie
12:25pm	12:30pm	5	-	Discussion	
12:30pm	**1:30pm**	**60**	**Lunch**		

Starts	Ends	Min	Code	Topics	Speakers
Session 4: Functional Tissue Engineering and Repair of Ligaments and Tendons					**Moderators: Wei Liu Yin Chih Fu**
1:30pm	1:45pm	15	S4-1	Keynote Lecture: Research of Tissue Engineered Tendon and Its Clinical Trial in Repairing of Ligaments and Tendons (p.50)	Hui Qi Xie
1:45pm	1:55pm	10	S4-2	Lubricin Reduces Adhesion Formation and Impairs the Healing of Repaired Flexor Tendon (p.51)	Yu Long Sun *Rs. fellow award list
1:55pm	2:00pm	5	-	Discussion	
2:00pm	2:10pm	10	S4-3	Cellular Response and Extracellular Matrix Breakdown in Rotator Cuff Tendon Rupture (p.52)	Bing Wu
2:10pm	2:15pm	5	-	Discussion	
2:15pm	2:20pm	5	S4-4	Monitoring Neovascularization in Tendon Healing by Three-Dimensional Doppler Ultrasound Imaging (p.53)	Bruma S.C. Fu
2:20pm	2:25pm	5	S4-5	Spatial and Temporal Changes of Collagens and Proteolycans in a Tendon Window Injury Model (p.54)	Pauline P.Y. Lui
2:25pm	2:30pm	5	S4-6	A Comparative Study on the Histological and Mechanical Properties of Bone-to-Bone, Bone-to-Tendon and Tendon-to-Tendon Healing – A Goat Achilles Tendon – Calcaneus Model (p.55)	Peng Zhang *Rs. fellow award list
2:30pm	2:35pm	5	-	Discussion	
Session 5: Tissue Mechanics					**Moderators: Ling Qin Edmond Y.S. Chao**
2:35pm	2:50pm	15	S5-1	Keynote Lecture: Mechanics Rules Cell Biology (p.56)	James H.C. Wang
2:50pm	3:00pm	10	S5-2	Specimen Dimensions Influence the Material Properties of Tendon Fascicles: Insights into Structure-Function Relationships (p.57)	Kirsten Legerlotz
3:00pm	3:05pm	5	-	Discussion	
3:05pm	3:10pm	5	S5-3	Four Loading Episodes during Early Tendon Healing Improve Tissue Quality (p.58)	Pernilla Eliasson *Student paper award list
3:10pm	3:15pm	5	S5-4	Anisotropic Properties of Stem Cell-Based Self-Assembled Tissues Cultured on a Micro Pattern-Processed Glass Plate (p.59)	Hiroki Sudama *Student paper award list
3:15pm	3:20pm	5	S5-5	Mechanical Stimulation Enhances Engineered Tendon Formation *In Vitro* and *In Vivo* (p.60)	Wei Liu *Rs. fellow award list
3:20pm	3:25pm	5	-	Discussion	
3:25pm	3:30pm	5	S5-6	*In Vivo* Length Changes of Ligaments Stabilizing the Trapezium and Trapeziometacarpal Joint during Thumb Movement (p.61)	Jing Xu *Y. faculty award list

Starts	Ends	Min	Code	Topics	Speakers
3:30pm	3:35pm	5	S5-7	Effects of Cyclic Tensioning Culture on a Stem Cell-Based Self Assembled Tissue (scSAT) Derived from Synovium (p.62)	Saito Kei *Student paper award list
3:35pm	3:40pm	5	-	Discussion	
3:40pm	4:10pm	30	-	**Break and Poster Session 2**	**Moderators: Masataka Deie Masahiro Kurosaka Hirotaka Sano**
Session 6: ACL Reconstruction-Biology of Healing and *In Vivo* Knee Kinematics					**Moderators: Harukazu Tohyama Shinichi Yoshiya**
4:10pm	4:25pm	15	S6-1	Keynote Lecture: The Graft Fixation Sequence Affects their Force Distributions in Double Bundle Anterior Cruciate Ligament Reconstruction (p.63)	Guoan Li
4:25pm	4:40pm	15	S6-2	Keynote Lecture: Technique and Problems of Anatomic Double Bundle ACL Reconstruction (p.64)	Masahiro Kurosaka
4:40pm	4:50pm	10	S6-3	Periosteum-Like Cell Sheets Enhanced Tendon-Bone Healing in an Anterior Cruciate Ligament Reconstruction (p.65)	Chih Hsiang Chang *Rs. fellow award list
4:50pm	4:55pm	5	-	Discussion	
4:55pm	5:05pm	10	S6-4	Immunohistochemical and Gene Expression Analysis in the Ruptured Human Anterior Cruciate Ligament ~Expression of Activated Stat3~ (p.66)	Takuya Naraoka
5:05pm	5:10pm	5	-	Discussion	
5:10pm	5:15pm	5	S6-5	Biomechanical Function of Anterior Cruciate Ligament Remnants: Effects of Remnant Pattern and Duration between Injury and Surgery on Knee Stability Evaluated with a Navigation System (p.67)	Atsuo Nakamae *Y. faculty award list
5:15pm	5:20pm	5	S6-6	*In-Situ* Force in the Three Bundles of the Human Anterior Cruciate Ligament (p.68)	Hitoshi Yagi
5:20pm	5:25pm	5	-	Discussion	
5:25pm	5:30pm	5	S6-7	Transforming Growth Factor-β1 Gene Transfer Therapy Improves Achilles Tendon Healing by Promoting Collagen Formation (p.69)	Yu Hou
5:30pm	5:35pm	5	S6-8	Effects of Low-Intensity Resistance Training with Restricted Muscle Blood Flow on Tendon and Ligament Maturation-Study of after ACL Reconstruction (p.70)	Rieko Kuramochi
5:35pm	5:40pm	5	-	Discussion	
5:40pm	**5:45pm**	**5**	-	**Closing Remark**	**Chih Hwa Chen**
6:45pm	9:45pm			Maxim Palace, New Town Plaza, Shatin	

Poster Sessions

Starts	Ends	Code	Topics	Speakers
9:55am	10:25am	**Poster Session 1**		**Moderators: Masataka Deie Hirotaka Sano**
9:55am	9:58am	PS1-1	Local Administration of TGFB1/VEGF165 Gene Transduced Mesenchymal Stem Cells on Properties of Achilles Allograft Replacement of ACL in Rabbits (p.71) *(Best Poster Award competition presentation time: 2mins)*	Xue Lei Wei
9:58am	10:01am	PS1-2	The Assembly of hESC-MSC and Knitted Silk Scaffold Combined with Collagen Matrix Develop to Engineered Tendon under Mechanical Stress (p.72) *(Best Poster Award competition presentation time: 2mins)*	Zi Yin
10:01am	10:04am	PS1-3	An observational study to identify the presence of Achilles Tendinopathy and ultrasound detected changes in elite footballers and gender-matched controls (p.73) *(Best Poster Award competition presentation time: 2mins)*	Mark Perry
10:04am	10:07am	PS1-4	Neovascularization is an Essential Factor in Medial Collateral Ligament (MCL) Healing. (p.74) *(Best Poster Award competition presentation time: 2mins)*	Katsumasa Tei
10:07am	10:10am	PS1-5	Stress Changes of Lateral Collateral Ligament under Various Motions (p.75) *(Best Poster Award competition presentation time: 2mins)*	You Wang
		PS1-6	Histological Evaluation of Patellar Tendon and Its Enthesis in Trained, Untrained and Detrained Rats: Experimental Study, Preliminary Results (p.76)	Antonio Frizziero
		PS1-7	Serum Concentrations of the Neurotrophin BDNF and Those of TNF-Receptor1 Arecorrelated in Individuals with Achilles Tendinosis but Not in Healthy Controls (p.77)	Johan Bagge
		PS1-9	Will Multiple Freeze/Thaw Cycles Change the Tensile Properties of Human Patellar Tendons? (p.78)	Ho Joong Jung
		PS1-10	Arbitrary Starting Point of Separation Affect the Morphology of the Two Bundles of Anterior Cruciate Ligament at Insertion Sites (p.79)	Jin Zhong Zhao
		PS1-11	Effect of CTGF on the Tenogenic Differentiation of Rat Bone Marrow-Derived Mesenchymal Stem Cells *In Vitro* (p.80)	Chao Song
		PS1-12	Measurement of normal tibialis anterior muscle architecture by ultrasound in elite athletes and controls-A cross-sectional study (p.81)	Matt Wilson

Starts	Ends	Code	Topics	Speakers
3:40pm	4:10pm	**Poster Session 2**		**Moderators:** **Masataka Deie** **Masahiro Kurosaka** **Hirotaka Sano**
3:40pm	3:43pm	PS2-1	An Experiment Of Human Acellular Dermal Matrix on the Rotator Cuff Repair in a Canine Model (p.82) *(Best Poster Award competition presentation time: 2mins)*	Da Mi Choi
3:43pm	3:46pm	PS2-2	Effect of Cyclic Stretching on the Tenogenic Differentiation of Rat Bone Marrow-Derived Mesenchymal Stem Cells *In Vitro* (p.83) *(Best Poster Award competition presentation time: 2mins)*	Ming Ni
3:46pm	3:49pm	PS2-3	Dynamic Strain-Mediated Tendinogenic Differentiation of Bone Marrow Stromal Cells on Small Intestinal Submucosa Membrane (p.84) *(Best Poster Award competition presentation time: 2mins)*	Ting Wu Qin
3:49pm	3:52pm	PS2-4	Regulatory Effect of Collagen V on the Fibrillogenesis of Tenocytes in a Tissue Engineering Model (p.85) *(Best Poster Award competition presentation time: 2mins)*	Ping Lu
3:52pm	3:55pm	PS2-5	Stromal Cell-Derived Factor 1 Enhances the Regeneration of Tendon Using a Knitted Silk Scaffold Combined with Collagen Matrix (p.86) *(Best Poster Award competition presentation time: 2mins)*	Wei Liang Shen
		PS2-6	Effect of GDF-7 on the Tenogenic Differentiation of Rat Bone Marrow-Derived Mesenchymal Stem Cells *In Vitro* (p.87)	Chao Song
		PS2-7	Metabolism of Extracllular Matrix in Flexor Tendon with Stress Deprivation (p.88)	Yu Long Sun
		PS2-8	Carpal Tunnel Size and Shape Alteration Induced by Transverse Carpal Arch Deformation (p.89)	Hong Pan
		PS2-9	Induced Pluripotent Stem Cells as a Model to Treat and Study Human Osteoarticular Diseases (p.90)	Miguel Esteban
		PS2-10	High Efficiency Differentiation of Neuronal Cells from Mouse Embryonic Stem Cells by Gradual Medium Replacement (p.91)	Xi Ning Pang
		PS2-11	Does the site of maximum neovascularisation correlate with the site of pain in recalcitrant mid-tendon Achilles Tendinopathy? A prospective observational study (p.92)	Kiran Divani
		PS2-12	The Effect of Alendronate on the Mechanical Strength of the Tendon Graft to Bone Tunnel Complex after ACL Reconstruction (p.93)	Pauline P.Y. Lui

Appendix V

Associative Program

Feb 6, 2010, 4/F Li Ka Shing Medical Sciences Building

This is a brand-new element of ISL&T-X.

Mentor Group will give you useful hints on paper writing skills and conducting translational research for clinical and industry needs. And you will also listen to and discuss with your experts on controversial ligaments and tendons research issues.

9:15-10:15am **Mentor Group** **Rm 407**	***Translational Research for clinical and industry needs*** **Cheng Kung Cheng**
	Skills on writing papers **Savio L-Y. Woo**
10:15am-12:15pm	**Option A: Lab Tour** **Rm 406**
10:15am-1:15pm	**Option B: Research Forum** **Rm 407**

Option A: Lab tour (Rm 406)

It will give you a live demonstration of the advanced lab equipment and advanced research techniques in the hosting University. Participants will be divided in small groups and guided by our teams to tour around laboratories to see demonstration on

- micro-CT imaging technique for the imaging of calcification in tendons and tunnel healing in ACL reconstruction;
- High resolution animal ultrasound imaging for monitoring tendon structure and vascularization after injury;
- *In vivo* imaging system for cell tracing
- Cell migration system
- GMP laboratory for tissue transplantation in human
- Gait laboratory for studying human motions

Option B: Research Forum (Rm407)

- Discussion on controversial research issues related to ligaments and tendons.
- Moderators will introduce the topic and raise specific questions to experts in the field for comments. Then, moderators will pick 2-3 questions from the audience.
- Each topic will last for 30 – 40 mins.

Tentative questions are listed as follows:

A) Tendon cell differentiation

Moderator: Gang Li
Experts: James H.C. Wang & Wei Liu

1. How to define tendon stem cells?
2. How to define tenocyte?
3. What are the key factors for tenogenic differentiation?
4. Is mechanical factor essential for tendon cell differentiation?
5. Can we make tendon tissues in vitro?

B) Roles of inflammation in tendinopathy

Moderator: Christer G. Rolf
Experts: James H.C. Wang, Wen Chung Tsai & Roger K.W. Smith

1. What type and function do you describe for "the tendon cells" which is found in the hypercellular areas of tendinopathy?
2. What is the role of the corresponding hypervascularity?
3. Was there ever an acute inflammation in tendinopathy?
4. Will NSAID halt the healing process in tendinopathy?
5. Is there any evidence based rationale for treatments such as "sclerotic injections' and low frequency ultrasound for the management of tendinopathy?
6. What are the future lines of research for possible cure of 1) symptoms and 2) structural and biological dysfunction of tendinopathy?

C) Animal model of tendinopathy

Moderator: Pauline P.Y. Lui
Experts: Nicola Maffulli, Roger K.W. Smith, Christer G. Rolf

1. Criteria and basis for assessment of animal models
2. Re-assessment of current animal models based on the criteria
3. Suggestions for the improvement of existing animal models

D) Innovations in ACL reconstruction

Moderator: Chih Hwa Chen

Experts: Yung Bok Jung, Harukazu Tohyama, Wei Liu, Patrick S.H. Yung

1. Anatomical or isometric reconstruction
2. Double bundle vs single bundle
3. New fixation devices for ACL graft fixation
4. Graft healing in the tunnel
5. Graft ligamentization in the joint
6. Graft choice in the future (Tissue engineering ligament, artificial ligament)
7. Ligament healing after ACL partial tear

To view the full program book and basic team booklet of ISL&T-X, please visit
Official website: http://www.pitt.edu/~msrc/islt.html
Hong Kong logistic Website: http://www.cuhk.edu.hk/whoctr/islt2010/

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