



9th Biannual Scientific Meeting IRSSD International Research Society of Spinal Deformities
Poznan, Poland, July 1st–4th, 2012

– PRELIMINARY PROGRAM –

SUNDAY, JULY 1ST 2012

15.00–15.30	Scoliosis Journal Board of Editors Meeting – Mercure Hotel
16.00–17.00	IRSSD Board Meeting – Mercure Hotel
15.00–17.00	Registration and reception of posters – Congress Center Przybyszewskiego Street 37
17.30–18.30	Registration and reception of posters – Poznan Opera, Fredry Street 9
18.30–20.30	Welcome Reception – Poznan Opera (Teatr Wielki, Fredry street 9, www.opera.poznan.pl)
	Welcome address (5 min.) <i>Tomasz Kotwicki, Local Organizer</i>
	Opening <i>Carl-Eric Aubin, President of IRSSD</i>
	Memorial address for Dr Moreland (5 min.)
	Invited lecture: One hundred years of orthopaedics in Poznan (10 min.) <i>Leszek Romanowski</i>
	Invited lecture: Contribution of IRSSD to knowledge on spinal deformities (10 min.) <i>Theodoros B Grivas</i>
	Presidential address: 3D analysis and modeling of spinal deformities. State of the art (15 min.) <i>Carl-Eric Aubin</i>
	Concert (30 min.)
	Cocktail (30 min.)
20.45	IRSSD Board dinner

SUN, JUL 1ST 2012

MON, JULY 2ND 2012

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MONDAY, JULY 2ND 2012

Congress Center, Przybyszewskiego Street 37
6-minute presentation followed by 4-minute discussion

08.30–09.20 SESSION I – ETIOLOGY

- 1 ROLE OF HIGH CENTRAL LEPTIN ACTIVITY IN A SCOLIOSIS MODEL CREATED IN BIPEDAL AMPUTATED MICE
T Wu, X Sun, Z Zhu, X Zheng, B Qian, F Zhu, JCY Cheng, Y Qiu
- 2 MATERNAL AGE AT BIRTH: DOES IT DICTATE THE EPIGENOTYPIC EXPRESSION OF THE TRUNKAL ASYMMETRY OF A CHILD?
TB Grivas, C Mihos, C Mazioti, N Zisis, S Sakellariopoulou, A Akriotis, RG Burwell
- 3 SCOLIOSIS IN THE 22Q11 DELETION SYNDROME
D Colo, C Van Weelden, M Kruijt, R Castelein
- 4 SECONDARY SCOLIOSIS AFTER THORACOTOMY IN PATIENTS WITH AORTIC COARCTATION AND PATENT DUCTUS ARTERIOSUS
M Rocławski, R Pankowski, A Smoczyński, M Ceynowa, W Kloc, W Wasilewski, P Jende, W Liczbik, P Beldziński, W Libionka, O Pierzak, S Adamski, M Niedbala
- 5 ETHIOPATHOGENESIS OF THE ADOLESCENT IDIOPATHIC SCOLIOSIS BASING ON NEUROIMAGING AND NEUROPHYSIOLOGICAL EXAMINATIONS WITH THE SPECIAL EMPHASIZING OF MOTOR EVOKED POTENTIALS (MEP)
J Huber, P Rogala

09.20–09.35 INVITED LECTURE – *Keith Bagnall: My concept on AIS etiology research*

09.35–10.35 SESSION II – GENETICS

- 6 ABNORMALLY LOWER EXPRESSION OF MELATONIN RECEPTOR IN OSTEOBLASTS OF ADOLESCENT IDIOPATHIC SCOLIOSIS GIRLS
APY Yim, GQ Sun, HY Yeung, KM Lee, KW Ng, TP Lam, Y Qiu, JCY Cheng
- 7 ASSOCIATION STUDY OF IL-17RC AND CHL1 POLYMORPHISMS WITH ADOLESCENT IDIOPATHIC SCOLIOSIS IN HAN CHINESE
S Zhou, F Lv, Z Zhu, X Qiu, W Wu, Z Chen, Z Liu, S Mao, J Jiang, X Lin, N Tang, JCY Cheng, Y Qiu
- 8 ASSOCIATION OF CHD7 POLYMORPHISM WITH SUSCEPTIBILITY TO AND SEVERITY OF IDIOPATHIC SCOLIOSIS IN CENTRAL EUROPEAN POPULATION: PRELIMINARY STUDY
P Janusz, T Kotwicki, M Kotwicka, M Andrusiewicz
- 9 MUTATION ANALYSIS OF MESP2, HES7 AND DUSP6 GENE EXONS IN PATIENTS WITH CONGENITAL SCOLIOSIS
X Qiu, S Zhou, H Jiang, M Ji, Q Ding, F Lv, Z Liu, N Tang, JCY Cheng, Y Qiu
- 10 IDENTIFICATION OF KEY DISEASE-MODIFYING FACTORS IN ADOLESCENT IDIOPATHIC SCOLIOSIS
M Elbakry, M Taheri, S Bouhanik, M Akoume, A Moreau
- 11 THE IDENTIFICATION OF UNIQUE GENE EXPRESSION PROFILES ASSOCIATED WITH CELLULAR AND BIOCHEMICAL ENDOPHENOTYPES OF IDIOPATHIC SCOLIOSIS
KF Gorman, C Julien, Q Yuan, A Franco, DS Wang, S Bouhanik, G Larouche, Lacroix, A Moreau

10.35–11.00 COFFEE BREAK

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11.00–11.40 SESSION III – GENETICS & ETIOLOGY

- 12 GENETIC ASSOCIATION STUDIES IN IDIOPATHIC SCOLIOSIS – WHO WAS REALLY TESTED?
P Harasymczuk, P Janusz, T Kotwicki
- 13 ADOLESCENT IDIOPATHIC SCOLIOSIS (AIS): METABOLIC FACTORS, BIOMECHANICAL STRESS AND ESTROGEN IMPACT
F Moldovan, I Villemure, K Fendri, G Grimard, C Zaouter, S Parent, A Moreau, H Labelle, SA Patten
- 14 THE VALUE OF DIFFERENT RISSER GRADING SYSTEMS IN DETERMINING GROWTH MATURITY OF GIRLS WITH ADOLESCENT IDIOPATHIC SCOLIOSIS
W Wang, X Zhen, X Sun, Z Zhu, F Zhu, TP Lam, JCY Cheng, Y Qiu
- 15 EXOME SEQUENCING IDENTIFIES NOVEL CANDIDATE MUTATIONS IN IDIOPATHIC
F Moldovan, SA Patten, K Fendri, S Girard, C Zaouter, P Edery

11.40–12.30 CONTROVERSIAL TOPIC 1: RELEVANCE OF GENETIC STUDIES ON IDIOPATHIC SCOLIOSIS

Moderator

Clinical point

Genetic point

Biological point

Discussion

12.30–14.00 LUNCH

13.30–14.00 POSTER SESSION 1 – GENETICS & ETIOLOGY, IMAGING & MEASUREMENTS

Visiting posters, discussion moderated by 2 chairmen

- P1-1 A LINE OF ZEBRAFISH WITH INCREASED INCIDENCE OF SPINAL DEFORMITIES
HG Tomasiewicz, XC Liu, C Tassone, P North, J Thometz
- P1-2 ESTROGEN RECEPTORS' EXPRESSION IN DEEP PARAVERTEBRAL MUSCLES OF GIRLS WITH IDIOPATHIC SCOLIOSIS – RELATION TO CLINICAL PARAMETERS
B Rusin, A Głodek, P Urbaniak, T Kotwicki, M Kotwicka
- P1-3 EVER-PRESENT FACTORS IN HEALTHY CHILDREN THAT CAN DEFORM THEIR SPINES. OPPOSITION TO DICKSON'S PARADIGM ON LORDOSIS
PJM van Loon
- P1-4 A SIMILAR APPROACH OF ADOLESCENT SCOLIOSIS AND KYPHOSIS WITH THE USE OF GROWTH ITSELF IN THORACOLUMBAR LORDOTIC INTERVENTION (TLI)
PJM van Loon
- P1-5 CORRELATION OF IDIOPATHIC SCOLIOSIS ASSESSMENTS BETWEEN NEWLY DEVELOPED MILWAUKEE TOPOGRAPHIC SYSTEM AND QUANTEC
C Lim, C Tassone, X Liu, J Thometz, R Lyon
- P1-6 TRUNK ASYMMETRY IN ONE THOUSAND SCHOOL CHILDREN AGED 7-10 YEARS
Ł Stolinski, T Kotwicki
- P1-7 HOW TO MEASURE KYPHOSIS IN EVERYDAY CLINICAL PRACTICE: A RELIABILITY STUDY ON DIFFERENT METHODS
F Zaina, S Donzelli, F Negrini, S Negrini
- P1-8 WHY X-RAY IS NOT RELIABLE TO ASSESS SAGITTAL PROFILE: A CROSS SECTIONAL STUDY
F Zaina, P Pizzetti, S Donzelli, F Negrini, S Negrini
- P1-9 THE METHOD OF GEOMETRICAL COMPARISON OF 3-DIMENSIONAL OBJECTS CREATED FROM DICOM IMAGES
D Gawęł, K Danielewicz, M Nowak





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P1-10	ASSESSMENT OF TRUNK ASYMMETRY IN THE TRANSVERSE PLANE BY A GEOMETRIC OUTLINE OF TRUNK DEFORMATION (GOTD) <i>IM Kowalski, T Giżewski, K Zaborowska–Sapeta, P Siwik, H Protasiewicz–Fałkowska</i>
P1-11	INVESTIGATION OF A LOW COST METHOD TO QUANTIFY COSMETIC DEFECT <i>T Shannon, N Chockalingam</i>
P1-12	IS CURVE DIRECTION CORRELATED WITH THE SIDE OF DOMINANT DISPLACEMENT OF CEREBELLAR TONSIL AND SYRINX DEVIATION IN THORACIC SCOLIOSIS SECONDARY TO CHIARI MALFORMATION TYPE I AND SYRINGOMYELIA? <i>T Wu, Z Zhu, X Sun, H Yan, X Zheng, B Qian, F Zhu, W Chu, JCY Cheng, Y Qiu</i>

14.00–15.00 SESSION IV – IMAGING

16	NEURONAVIGATION-GUIDED SPINE SURGERY <i>P Bełdziński, W Kloc, O Pierzak, W Libionka, W Liczbik, B Szopa</i>
17	AN IMPROVED KINEMATIC MODEL OF THE SPINE FOR THREE-DIMENSIONAL MOTION ANALYSIS IN VICON SYSTEM <i>MM Długosz, D Panek, P Maciejasz, W Chwała</i>
18	COMPUTATIONAL MORPHOMETRY OF SEMICIRCULAR CANALS IN ADOLESCENT IDIOPATHIC SCOLIOSIS (AIS) BASED ON HIGH-RESOLUTION MR IMAGES <i>WCW Chu, L Shi, D Wang, JCY Cheng</i>
19	STATISTICAL DIFFERENCE IN CEREBRAL CORTICAL THICKNESS IN PATIENTS WITH ADOLESCENT IDIOPATHIC SCOLIOSIS AND NORMAL CONTROLS USING COMPUTATIONAL TECHNIQUES – THE UPDATED DATA <i>WCW Chu, L Shi, D Wang, JCY Cheng</i>
20	SYSTEMATIC ANALYSIS OF THE NEUROCENTRAL JUNCTION (NCJ) IN THE NORMAL INFANTILE, JUVENILE AND ADOLESCENT SPINE <i>T Schlösser, M Janssen, H Attrach, M Viergever, K Vincken, R Castelein</i>
21	ARE BENDING FILMS USEFUL FOR LENKE CLASSIFICATION OF IDIOPATHIC SCOLIOSIS? <i>M Tyrakowski, T Kotwicki, A Koch, M Drwięga, K Lisiecka, D Ławniczak, S Pietrzak, J Czubak</i>

15.00–15.20 INVITED LECTURE – *Geoffrey Burwell, Peter Dangerfield: Whither aetiopathogenesis of adolescent idiopathic scoliosis*

15.20–16.00 COFFEE BREAK

16.00–17.00 SESSION V – IMAGING

22	DISCORDANCE IN SPINAL AND THORACIC CORRECTION USING POWERFUL FULL SCREW CONSTRUCTS IN IDIOPATHIC SCOLIOTIC <i>K Soultanis, TB Grivas, KA Starantzis, NA Stavropoulos, C Markopoulos, PJ Papagelopoulos</i>
23	EVALUATION OF THE PHYSICAL SIGNIFICANCE OF THE RIB VERTEBRA ANGLE DIFFERENCE AND ITS 3D COUNTERPART IN EARLY ONSET SCOLIOSIS <i>G Foley, CE Aubin, H Labelle, J Sanders, J d'Astous, C Johnston, S Parent</i>
24	ANALYSIS OF ANTERIOR TRUNK SYMMETRY INDEX (ATSI). PRELIMINARY REPORT <i>Ł Stolarski, T Kotwicki, D Czaprowski, J Chowanska, N Suzuki</i>
25	SENSITIVITY-TO-CHANGE OF FULL TORSO SURFACE TOPOGRAPHY MEASUREMENTS IN ADOLESCENTS WITH IDIOPATHIC SCOLIOSIS AND A MAIN THORACIC CURVE <i>EC Parent, PQ Zhang, D Hill, M Moreau, D Hedden, E Lou</i>
26	A NEW 3D TOPOGRAPHIC DEVICE FOR MONITORING SCOLIOSIS PROGRESSION IN CHILDREN <i>XC Liu, JC Tassone, JG Thometz, RM Lyon, S Tarima, CH Lim, LC Paulsen</i>





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- 27 GONIOMETER EVALUATION OF THORACIC KYPHOSIS AND LUMBAR LORDOSIS IN ADOLESCENT:
A VALIDITY AND RELIABILITY STUDY
AR Gravina, C Ferraro, A Frizziero, M Ferraro, S Masiero

19.00–23.00 SOCIAL EVENT

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TUESDAY, JULY 3RD 2012

Congress Center, Przybyszewskiego Street 37
6-minute presentation followed by 4-minute discussion

08.30–09.20 SESSION VI – BIOMECHANICS

- 28 THE STRUCTURE OF THE DISORDERS OF POSTURE AND SPINAL DEFORMITY IN AGE AND SEX ACCORDING TO COMPUTER OPTICAL TOPOGRAPHY
V Sarnadskiy
- 29 INTEGRAL AND STIMULATING ENMG IN ADOLESCENT IDIOPATHIC SCOLIOSIS
I Syngayevskaya, S Bumakova, D Pinchuk, M Dudin
- 30 PECULIARITIES OF BRAIN FUNCTIONING IN CHILDREN WITH AIS ACCORDING TO EEG STUDIES
D Pinchuk, M Dudin, S Bekshayev, S Bumakova, O Pinchuk
- 31 PATTERNS OF WEIGHT BEARING IMPACT SAGITTAL SPINAL BALANCE
HR Weiss
- 32 A MULTIBODY-BASED APPROACH TO THE COMPUTATION OF SPINE INTERVERTEBRAL MOTIONS IN SCOLIOTIC PATIENTS
G Abedrabbo, P Fissette, P-A Absil, P Mahaudens, C Detrembleur, M Raison, X Banse, C-E Aubin, M Mousny

09.20–09.35 INVITED LECTURE – *Rene Castelein*: Pre-existent rotation of the normal spine at different ages and its consequences for the scoliotic mechanism

09.35–10.35 SESSION VII – BIOMECHANICS

- 33 HIGH OSTEOPONTIN PLASMA LEVEL ASSOCIATED WITH ABNORMAL CORTICAL BONE MINERAL DENSITY IN GIRLS WITH ADOLESCENT IDIOPATHIC SCOLIOSIS
GQ Sun, TP Lam, NG Bobby, PY Yim, KM Lee, A Moreau, Y Qiu, JCY Cheng
- 34 ABNORMAL BONE MATRIX MINERALIZATION IN PATIENTS WITH ADOLESCENT IDIOPATHIC SCOLIOSIS
GQ Sun, TP Lam, NG Bobby, PY Yim, KM Lee, Y Qiu, JCY Cheng
- 35 PORCINE SPINE FINITE ELEMENT MODEL AS AN ALTERNATIVE TOOL FOR THE VALIDATION OF A NOVEL FUSIONLESS DEVICE
B Hachem, CE Aubin, M Driscoll, S Parent
- 36 FINITE ELEMENT MODEL OF SPINAL HEMIEPIPHYSIODESIS: EFFECT OF CONTACT CONDITIONS, INITIAL CONDITIONS, AND GROWTH
DI Bylski-Austrow, B Kumar, EJ Wall, YJ Liu
- 37 STATIC AND DYNAMIC POSTURAL CONTROL IN GIRLS WITH IDIOPATHIC SCOLIOSIS
M Wiernicka, D Łochyński, T Kotwicki, Ł Michałowski, E Kamińska, J Lewandowski, E Hurnik
- 38 VERTEBRAL LONG FUSION IS A TUBULAR BONE. A 3-D ANALYSIS OF BONE FUSION REMODELLING IN SCOLIOSIS SURGERY WITHOUT, WITH AND AFTER REMOVAL THE INSTRUMENTATION
A Valassina, AG Aulisa, L Aulisa

10.35–11.00 COFFEE BREAK

11.00–12.00 SESSION VIII – BIOMECHANICS

- 39 THE EFFECT OF LEG LENGTH DISCREPANCY ON PELVIS AND SPINE KINEMATICS DURING GAIT
R Needham, N Chockalingam, D Dunning, A Healy, E Ahmed, A Ward

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- 40 LBP AND LOWER LIMB DISCREPANCY: 3D EVALUATION OF POSTURAL REBALANCING VIA UNDERFOOT WEDGE CORRECTION
M D'Amico, P Roncoletta, F Di Felice, D Porto, RG Bellomo, R Saggini
- 41 LOMBO-SACRAL JOINT EFFORTS DURING GAIT: COMPARISON BETWEEN HEALTHY AND SCOLIOTIC SUBJECTS
M Raison, B Ballaz, C Detrembleur, P Mahaudens, J Lebleu, P Fissette, M Mousny
- 42 THE PELVIC LORDOSIS: AN ESSENTIAL ADAPTATION IN HUMAN EVOLUTION, AND A DETERMINANT OF SPINOPELVIC ALIGNMENT
MMA Janssen, T Vrtovec, F Pernuš, FC Öner, EE Vereecke, AJ Channon, MA Viergever, KL Vincken, RM Castelein
- 43 SAGITTAL SPINAL PROFILE AND SPINOPELVIC BALANCE IN PARENTS OF SCOLIOTIC CHILDREN, AS COMPARED TO NORMAL CONTROLS
MMA Janssen, KL Vincken, SM Van Raak, T Vrtovec, B Kemp, MA Viergever, LW Bartels, RM Castelein
- 44 THE EFFECT OF FRONTPACKS, SHOULDER BAGS AND HANDHELD BAGS ON 3D BACK SHAPE AND POSTURE IN YOUNG UNIVERSITY STUDENTS: AN ISIS2 ATUDY
J Bettany-Saltikov, L Cole

12.00–13.00 MINI-SYMPOSIUM. LOWER LIMBS – PELVIS – SPINE: ANATOMICAL ASSEMBLAGE VERSUS EFFICIENT FUNCTIONALITY

Moderator

Point by biomechanician – *Nachi Chockalingam*

Point by surgeon – *Marek Jóźwiak*

Point by physiotherapist – *Darek Czaprowski*

Discussion

13.00–14.00 LUNCH

14.00–14.30 POSTER SESSION 2 – BIOMECHANICS & MOVEMENT & POSTURE, GROWTH & METABOLISM

Visiting posters, discussion moderated by 2 chairmen

- P2-1 THE BIOMECHANICAL EFFECTS OF THE SPINAL INSTRUMENTATION AND FUSION ON THE SPINO-PELVIC PARAMETERS IN ADOLESCENT IDIOPATHIC SCOLIOSIS (AIS)
S Pasha, C-E Aubin, H Labelle, S Parent, J-M Mac Thiong
- P2-2 VARIATIONS IN BIOELECTRIC ACTIVITY DURING SYMMETRIC LOADING AND ASYMMETRIC STRETCHING OF TRUNK EXTENSORS IN YOUNG ADULT WOMEN WITH MILD SINGLE CURVE SCOLIOSIS
W Chwała, M Płaszewski, P Kowalski
- P2-3 PRESENT DAY EXPLANATIONS OF CLINICAL SIGNS IN THE BIOMECHANICAL ETIOLOGY OF THE SO-CALLED IDIOPATHIC SCOLIOSIS (1995 – 2011). THE RELATIONSHIP BETWEEN THE “MODEL OF HIPS MOVEMENT” AND THE CHARACTER OF SCOLIOSIS; THREE GROUPS AND FOUR TYPES. THE CAUSATIVE ROLE OF “GAIT” AND “STANDING ‘AT EASE’ ON THE RIGHT LEG”
T Karski
- P2-4 TYPICAL AND ATYPICAL AIS. PATHOGENESIS
M Dudin, D Pinchuk
- P2-5 LEG LENGTH DISCREPANCY IN SCOLIOTIC PATIENTS
M D'Amico, P Roncoletta, F Di Felice, D Porto, RG Bellomo, R Saggini
- P2-6 INFLUENCE ON MASTICATION OF ADOLESCENT IDIOPATHIC SCOLIOSIS: PREVALENCE OF REVERSE CHEWING CYCLES WITH AND WITHOUT BRACE
MG Piancino, T Vallelonga, G Frongia, M Brayda, D Braddebin, C Debernardi, P Bracco,





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P2-7	VALIDATION OF A MULTI-SEGMENT SPINAL MODEL FOR KINEMATIC ANALYSIS AND A COMPARISON OF DIFFERENT DATA PROCESSING TECHNIQUES <i>R Needham, N Chockalingam, R Naemi, T Shannon, A Healy</i>
P2-8	INTER-EXAMINER, INTRA-SESSION AND INTER-SESSION RELIABILITY OF GAIT MEASUREMENT IN NORMAL ADULT SUBJECT <i>J Leszczewska, D Czaprowski, P Pawlowska, K Białobrzewska, A Gębicka, T Kotwicki</i>
P2-9	CLASSIFICATION DISORDERS OF POSTURE AND SPINAL IN THREE DIMENSIONS ACCORDING TO COMPUTER OPTICAL TOPOGRAPHY <i>V Sarnadskiy</i>
P2-10	THE EVOLUTION OF STATE OF VERTEBRAL COLUMN IN THREE PLANES <i>V Pecherskiy, L Lihacheva, A Chicherin, M Dudin, D Pinchuk</i>
P2-11	ANALYSIS OF CHANGES IN SELECTED BODY CHARACTERISTICS IN MANY YEARS OF OBSERVATION OF CHILDREN AND ADOLESCENTS WITH FAULTY BODY POSTURE <i>M Kluszczynski, J Czernicki</i>
P2-12	NEUROHUMORAL REGULATION IN CHILDREN WITH ADOLESCENCE IDIOPATHIC SCOLIOSIS (AIS) <i>T Khaymina, T Avaliani, M Dudin, D Pinchuk</i>
P2-13	PHOTODYNAMIC IMPACT ON EPIPHYSEAL PLATES <i>S Kurchenko, A Shashko, M Dudin, V Mikhaylov, G Netylko, V Ashmarov</i>
P2-14	LOWER HANDGRIP STRENGTH IN GIRLS WITH ADOLESCENT IDIOPATHIC SCOLIOSIS (AIS) – A CASE-CONTROL STUDY <i>WS Yu, KY Chan, FWP Yu, HY Yeung, KM Lee, KW Ng, Y Qiu, TP Lam, JCY Cheng</i>
P2-15	THE IN-VIVO EFFECT OF TORQUE ON GROWTH IN CAUDAL VERTEBRAE <i>R Rizza, XC Liu, J Thometz</i>
P2-16	NUTRITIONAL STATUS OF CHILDREN AND ADOLESCENTS WITH IDIOPATHIC SCOLIOSIS – PRELIMINARY RESULTS <i>E Matusik, J Durmala, P Matusik, E Malecka-Tendera</i>
P2-17	EARLY DEVELOPMENT OF COSTOVERTEBRAL JOINTS <i>PJ Chen, W Wozniak</i>
P2-18	SEVERE SPINAL DEFORMITY AND MULTIPLE VERTEBRAL COLLAPSES IN JUVENILE CUSHING SYNDROME <i>E Pola, B Rossi, M Mormando, LA Nasto, D Colangelo, L De Marinis, L Aulisa</i>

14.30–16.00 SESSION IX – GROWTH AND METABOLISM

45	INFLUENCE OF DYNAMIC LOADING PARAMETERS ON BONE GROWTH MODULATION <i>A-L Ménard, B Valteau, I Londono, F Moldovan, G Grimard, I Villemure</i>
46	ASSOCIATION OF VOLUMETRIC BONE MINERAL DENSITY WITH LEPTIN AND SOLUBLE LEPTIN RECEPTOR IN GIRLS WITH ADOLESCENT IDIOPATHIC SCOLIOSIS <i>EMS Tam, FWP Yu, Z Liu, TP Lam, BKW Ng, KM Lee, Q Yong, JCY Cheng</i>
47	BONE QUALITY IN ADOLESCENT IDIOPATHIC SCOLIOSIS GIRLS – A CASE-CONTROL STUDY <i>WS Yu, KY Chan, FWP Yu, HY Yeung, KM Lee, KW Ng, Y Qiu, TP Lam, JCY Cheng</i>
48	ELEVATED SOLUBLE LEPTIN RECEPTOR LEVEL AND ASSOCIATION WITH BODY COMPOSITION IN GIRLS WITH ADOLESCENT IDIOPATHIC SCOLIOSIS <i>EMS Tam, HY Yeung, Z Liu, TP Lam, T Ting, JYF Lok, BKW Ng, KM Lee, Q Yong, JCY Cheng</i>
49	IS AIS UNDER 20-30° A CHAOTIC DYNAMICAL SYSTEM? <i>JC de Mauroy, JM Ginoux</i>
50	ABNORMAL SKELETAL GROWTH PATTERNS IN ADOLESCENT IDIOPATHIC SCOLIOSIS – A LONGITUDINAL STUDY TILL SKELETAL MATURITY <i>APY Yim, HY Yeung, WJ Wang, VWY Hung, L Qin, KM Lee, TP Lam, Y Qiu, JCY Cheng</i>





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| 51 | UPPER ARM LENGTH MODEL SUGGESTS A TRANSIENT ASYMMETRY PROCESS IN THE PATHOGENESIS OF RIGHT THORACIC ADOLESCENT IDIOPATHIC SCOLIOSIS (RT-AIS) IN GIRLS
<i>RG Burwell, RK Aujla, MP Grevitt, TL Randell, PH Dangerfield, AA Cole, AS Kirby, FJ Polak, RK Pratt, JK Webb, A Moulton</i> |
| 52 | ANALYSIS OF BODY GROWTH PARAMETERS IN GIRLS WITH ADOLESCENT IDIOPATHIC SCOLIOSIS: SINGLE THORACIC IDIOPATHIC SCOLIOSIS VERSUS SINGLE LUMBAR IDIOPATHIC SCOLIOSIS
<i>Z Liu, Z Zhu, B Qian, F Zhu, W Wang, W Chu, JCY Cheng, Y Qiu</i> |
| 53 | HEIGHT VELOCITY CURVES IN FEMALE PATIENTS WITH IDIOPATHIC SCOLIOSIS
<i>M Chazono, S Soshi, Y Kida, K Hashimo, T Inoue, Y Nakamura, A Shinohara, K Marumo, K Kono, N Suzuki</i> |

16.00–16.45 IRSSD BUSINESS MEETING

19.30–23.00 GALA DINNER





WEDNESDAY, JULY 4TH 2012

Congress Center, Przybyszewskiego Street 37
6-minute presentation followed by 4-minute discussion

08.30–09.20 SESSION X – TREATMENT

- 54 BIOMECHANICAL ANALYSIS OF PROXIMAL JUNCTIONAL KYPHOSIS: PRELIMINARY RESULTS
X Wang, M Cammarata, J-M Mac-Thiong, C-E Aubin
- 55 BIOMECHANICAL ANALYSIS OF PEDICLE SCREW DENSITY IN SPINAL INSTRUMENTATION FOR SCOLIOSIS TREATMENT: FIRST RESULTS
X Wang, C-E Aubin, AN Larson, H Labelle, S Parent
- 56 BIOMECHANICAL ANALYSIS OF FORCES SUSTAINED BY ILIAC SCREWS IN SPINAL INSTRUMENTATION FOR DEFORMITY TREATMENT: FIRST RESULTS
F Desrochers-Perrault, C-E Aubin, RM Schwend, X Wang
- 57 OPERATIVE TREATMENT OF ISTHMIC SPONDYLOLISTHESIS WITH POSTERIOR STABILIZATION AND ALIF. CAGES VERSUS AUTOGENOUS BONE GRAFTS.
R Pankowski, A Smoczyński, M Ročławski, M Ceynowa, W Kloc, W Wasilewski, P Jende, W Liczbik, P Beldziński, W Libionka, O Pierzak, S Adamski, M Niedbała
- 58 LATE RESULTS OF SURGICAL TREATED SCOLIOSIS WITH THE USE OF SELECTIVE AND EXTEND INSTRUMENTATION.
S Snela, G Sokół, P Jasiński

09.20–10.10 SESSION XI – TREATMENT

- 59 RADIOLOGICAL CORRECTION OF SEVERE THORACIC IDIOPATHIC SCOLIOSIS: COMPARISON OF THREE SURGICAL APPROACHES APPLIED TO SIMILAR CURVES
A Koch, P Janusz, P Harasymczuk, D Ławniczak, T Kotwicki
- 60
- 61 SURGICAL TREATMENT OF NEUROMUSCULAR SCOLIOSIS: CURRENT TECHNIQUES
T Gregg, F Lolli, F Vommaro, K Martikos, E Maredi, M Di Silvestre, S Giacomini, A Cioni
- 62
- 63 THE INFLUENCE OF THE DEVELOPMENT OF SCOLIOSIS POSTERIOR SURGERY ON 3-PLANAR DEFORMITY CORRECTION
R Pankowski, M Ročławski, A Smoczyński, M Ceynowa, W Kloc, W Wasilewski, P Jende, W Liczbik, P Beldziński, W Libionka, O Pierzak, S Adamski, M Niedbała

10.10–10.40 COFFEE BREAK

10.40–11.40 SESSION XII – TREATMENT

- 65 INTRAOPERATIVE NEUROPHYSIOLOGIC MONITORING (INM) IN SCOLIOSIS SURGERY.
R Pankowski, K Dzięgiel, M Ročławski, A Smoczyński, M Ceynowa, W Kloc, W Wasilewski, P Jende, W Liczbik, P Beldziński, W Libionka, O Pierzak, S Adamski, M Niedbała
- 66 TOWARD THE NEXT GENERATION OF SIMULATOR FOR INTRAOPERATIVE NAVIGATION OF SCOLIOTIC SPINE SURGERIES
O Cartiaux, C-E Aubin, H Labelle, F Cheriet
- 67 SURGICAL TREATMENT FOR SCOLIOSIS ASSOCIATED WITH RARE DISEASE
T Gregg, F Lolli, E Maredi, M Di Silvestre, F Vommaro, K Martikos, S Giacomini, A Cioni

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- 68 SURGICAL TREATMENT OF "EARLY ONSET" SCOLIOSIS IN NEUROFIBROMATOSIS
T Gregg, K Martikos, F Lolli, F Vommaro, E Maredi, M Di Silvestre, S Giacomini, A Cioni
- 69 COMPLICATIONS INCIDENCE IN EARLY ONSET SCOLIOSIS TREATED WITH GROWING SPINAL IMPLANTS
T Gregg, K Martikos, F Lolli, F Vommaro, E Maredi, M Di Silvestre, S Giacomini, A Cioni

11.40–12.30 CONTROVERSIAL TOPIC 2: CONSERVATIVE OR SURGICAL MANAGEMENT OF IDIOPATHIC SCOLIOSIS – FUTURE PERSPECTIVES

Moderator – *Nobumasa Suzuki*

Point by surgeon – *Daniel Zarzycki*

Point by physiatrist – *Stefano Negrini*

Point by patient – *Joe O'Brien*

Discussion

12.30–14.00 LUNCH

13.30–14.00 POSTER SESSION 2 – TREATMENT, QUALITY OF LIFE

Visiting posters, discussion moderated by 2 chairmen

- P3-1 CONGENITAL SCOLIOSIS, RIYADH EXPERIENCE
M Alfawareh, W Attia, K Almusrea, M Halwani
- P3-2 SPINECOR, EXERCISES AND SPORT RIGID BRACE: WHAT IS THE BEST FOR ADOLESCENT IDIOPATHIC SCOLIOSIS? SHORT TERM RESULTS FROM 2 RETROSPECTIVE STUDIES.
F Zaina, S Donzelli, F Negrini, S Negrini
- P3-3 CORRECTIVE EXERCISES IN MULTIMODALITY THERAPY OF IDIOPATHIC SCOLIOSIS IN CHILDREN
N Pugacheva
- P3-4 THE EFFECTIVENESS OF PERCUTANEOUS VERTEBROPLASTY IN THE TREATMENT OF DIFFERENT ETIOLOGY VERTEBRAL BODY FRACTURES.
W Kloc, W Libionka, O Pierzak, W Liczbik, P Bełdziński, B Szopa, R Pankowski, M Ročławski, A Smoczyński, M Ceynowa
- P3-5 THE EFFECT OF PRESSURE PAD LOCATION OF SPINAL ORTHOSIS ON THE TREATMENT OF ADOLESCENT IDIOPATHIC SCOLIOSIS (AIS).
MS Wong, M Li, B Ng, TP Lam, M Ying, A Wong, J Cheng
- P3-6 OSTEOPATHIC METHOD FOR TREATMENT OF DISCAL HERNIAS
O Kalinovskaya
- P3-7 RESULTS OF SPINECOR DYNAMIC BRACING FOR IDIOPATHIC SCOLIOSIS
A Szwed, M Kołban, A Sterna
- P3-8 BRACE TREATMENT IN INFANTILE /JUVENILE PATIENTS WITH PROGRESSIVE SCOLIOSIS IS WORTHWHILE
HR Weiss
- P3-9 SHORT-TERM EFFECTS (ATR, KASPERCZYK'S SCALE, CHEST'S MOBILITY) OF USING OF PHYSIOTHERAPY METHOD IN THE TREATMENT OF AIS – PILOT STUDY
I Blicharska, A Brzek, J Durmala
- P3-10 BRACING CAN REDUCE HIGH DEGREE CURVES AND IMPROVE AESTHETICS IMMEDIATELY AFTER THE END OF GROWTH. FINAL RESULTS OF A RETROSPECTIVE CASE SERIES
S Negrini, S Donzelli, F Negrini, F Zaina





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P3-11	AIS, GROWTH ZONE, MAGNETIC FIELD <i>A Arsenev, M Dudin, V Lednev, N Belova, V Mikhaylov, G Sokolov</i>
P3-12	TREATMENT'S RESULTS OF THE IDIOPATHIC SCOLIOSIS, DEPENDING ON THE USED INSTRUMENTATION <i>S Snela, P Jasiński, G Sokół</i>
P3-13	OSTEOID OSTEOMA OF THE LUMBAR SPINE: RESECTION WITHOUT FUSION. CASE REPORT OF TWO CHILDREN <i>A Koch, T Kotwicki, A Szulc</i>
P3-14	SHORT-TERM EFFECTS OF COMBINATION OF SEVERAL PHYSIOTHERAPY METHODS ON THE RESPIRATORY FUNCTION – A CASE REPORT OF ADOLESCENT IDIOPATHIC SCOLIOSIS <i>B Wnuk, J Frackiewicz, J Durmala, K Czernicki, K Wadolowski</i>
P3-15	COMPARISON OF INFLUENCE OF THREE PHYSIOTHERAPEUTIC TECHNIQUES: POSTISOMETRIC RELAXATION, KINETIC CONTROL AND STABILIZATION TRAINING ON THE SHORTENING OF PELVIC GIRDLE MUSCLES: PROSPECTIVE, RANDOMIZED, SINGLE BLINDED STUDY <i>D Czaprowski, J Leszczewska, A Kolwicz, P Pawłowska, A Afeltowicz-Mich, D Sitarski, A Gębicka, T Kotwicki</i>
P3-16	RATE OF SURGEY IN A SAMPLE OF PATIENTS FULFILLING THE SRS INCLUSION CRITERIA TREATED WITH A CHÊNEAU BRACE OF ACTUAL STANDARD <i>HR Weiss, M Werkmann</i>
P3-17	VALIDATION OF THE TRANSPEDICULAR SCREWS IMPLANTATION IN PATIENTS WITH IDIOPATHIC SCOLIOSIS USING COMPUTED TOMOGRAPHY <i>S Kasongo, W Jurasz, Ł Bartochowski</i>
P3-18	THE EFFECTIVENESS OF SURGICAL TREATMENT OF SPONDYLOLISTHESIS WITH TRANSPEDICULAR INSTRUMENTATION <i>Ł Bartochowski, W Jurasz, A Nowakowski</i>
P3-19	A COMPARISON OF THE EFFECTS OF DEEP TISSUE MASSAGE AND THERAPEUTIC MASSAGE ON CHRONIC LOW BACK PAIN <i>M Romanowski, J Romanowska, M Grześkowiak</i>

14.00–15.10 SESSION XIII – CONSERVATIVE TREATMENT

70	A PILOT STUDY: SMART BRACE VERSUS STANDARD RIGID BRACE FOR THE TREATMENT OF SCOLIOSIS <i>E Lou, DL Hill, VJ Raso, A Donauer, MJ Moreau, JK Mahood, DM Hedden</i>
71	IN BRACE X-RAY CORRECTION CAN PREDICT SHORT TERM RESULTS IN SCOLIOSIS TREATMENT <i>F Zaina, S Donzelli, F Negrini, S Negrini</i>
72	BRACE WEAR CHARACTERISTICS DURING THE FIRST 6 MONTHS FOR THE TREATMENT OF SCOLIOSIS <i>E Lou, DL Hill, VJ Raso, A Donauer, MJ Moreau, JK Mahood, DM Hedden</i>
73	INCLUSION CRITERIA FOR PHYSICAL THERAPY INTERVENTION STUDIES ON SCOLIOSIS – A SYSTEMATIC REVIEW <i>HR Weiss</i>
74	AN ALTERNATIVE TO A RANDOMIZED CONTROL DESIGN FOR ASSESSING THE EFFICACY AND EFFECTIVENESS OF BRACING IN AIS <i>D Fong, K Cheung, Y Wong, W Cheung, I Fu, E Kuong, K Mak, M To, K Luk</i>
75	STANDARD TECHNIQUE VS. CAD/CAM AND BIOMECHANICAL SIMULATIONS FOR THE DESIGN OF BRACES IN ADOLESCENT IDIOPATHIC SCOLIOSIS: FIRST RESULTS <i>F Desbiens-Blais, J Clin, S Parent, H Labelle, CE Aubin</i>
76	CHARACTERISTICS OF PATIENTS WITH MORE THAN 20° OF IMPROVEMENT OR WORSENING DURING CONSERVATIVE TREATMENT OF ADOLESCENT IDIOPATHIC SCOLIOSIS <i>S Negrini, S Donzelli, F Negrini, F Zaina</i>





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15.10–16.10 SESSION XIV – QUALITY OF LIFE

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| 77 | POLISH VALIDATION OF BRACE QUESTIONNAIRE (BRQ)
<i>E Kinel, T Kotwicki, A Podolska, M Białek, W Stryła</i> |
| 78 | QUALITY OF LIFE AND STRESS LEVEL IN ADOLESCENTS WITH IDIOPATHIC SCOLIOSIS SUBJECTED TO CONSERVATIVE TREATMENT
<i>E Kinel, A Podolska, T Kotwicki, M Białek, W Stryła</i> |
| 79 | THE INFLUENCE OF THE DEGREE OF SPINE CURVATURE ON THE QUALITY OF LIFE ASSESSMENT AMONG PATIENTS TREATED SURGICALLY WITH THE COTREL-DUBOUSSET METHOD
<i>B Gorzkowicz, M Kołban</i> |
| 80 | PSYCHOLOGICAL ASPECTS OF SCOLIOSIS SURGERY IN CHILDREN
<i>R Tomaszewski, M Janowska</i> |
| 81 | IS THE SRS-22 ABLE TO DETECT QOL CHANGES DURING CONSERVATIVE TREATMENTS?
<i>S Negrini, S Donzelli, M Dulio, F Negrini, F Zaina</i> |
| 82 | BRACING DOES NOT CHANGE THE SPORT HABITS OF PATIENTS
<i>S Negrini, S Donzelli, F Negrini, F Zaina</i> |

16.10–16.30 CLOSING REMARKS

