

## *Curriculum Vitae*

NAME: IOANNIS VOGIATZIS

DATE OF BIRTH: 11.07.68

NATIONALITY: GREEK

### Employment

**July 2012-present:** Associate Professor in Exercise Science at the University of Athens (Department of Physical Education and Sports Science).

**November 2007 – July 2012:** Assistant Professor in Exercise Science at the University of Athens (Department of Physical Education and Sports Science).

**September 2002 – October 2007:** Lecturer in Exercise Science at the University of Athens (Department of Physical Education and Sports Science).

**November 1998 – January 2002:** Research Fellow following receipt of a “Return Grant for Greek Scientists Living Abroad” at the University of Athens – Medical School (Department of Pulmonary and Critical Care Medicine).

**June 1995 - November 1998:** *Lecturer in Exercise Physiology and Integrative Physiology at the University of Sunderland (School of Health Sciences), UK.*

### Affiliations within the University of Athens-Medical School

**May 2003- today:** National Kapodistrian University of Athens, Medical School, Department of Critical Care Medicine, Director of Pulmonary Rehabilitation Centre, **Evangelismos Hospital**., Director of Pulmonary Rehabilitation Centre.

**October 2009- today:** National Kapodistrian University of Athens, Medical School, Department of Respiratory Medicine, **Sotiria Hospital**, Director of Pulmonary Rehabilitation Unit.

### Education

**September 1992 - June 1995:** *University of Glasgow, UK.* Faculty of Medicine, Institute of Physiology. **Ph.D. in Exercise Physiology.**

**September 1991- September 1992:** *University of Sheffield, UK.* Faculty of Medicine. Department of Medical Physics & Clinical Engineering. **M.Sc. in Sports Coaching.**

**October 1986 - July 1990:** University of Athens. Department of Physical Education and Sports Sciences. **B.Sc. in Physical Education and Sports Science.**

### Editorial Board & Scientific Societies Member

**07/2012-31/6/2014:** Member of the Editorial Board of the “*Journal of Applied Physiology*”: the official journal of the American Physiological Society

**01/2013-31/12/2015:** Member of the Editorial Board of the “*Respiratory Physiology & Neurobiology*”

**01/2013 – 12/2017:** Secretary of the Rehabilitation and Chronic Care Group (1.2.) of the Clinical Assembly of the **European Respiratory Society**

### Main research interests

- i. *Factors limiting exercise capacity in patients with COPD.* Over the past 10 years the published work of the applicant has been focused on how dynamic hyperinflation, expiratory flow limitation, impaired cardiac output, competition for blood flow between respiratory and locomotor muscles and peripheral muscle abnormalities, limit exercise capacity in patients COPD and healthy people.
- ii. *Effects of pulmonary rehabilitation in patients with COPD:* In addition, the published work of the applicant over the last 15 years has been focused on the effects of exercise training on the degree of exercise-induced dynamic hyperinflation and on remodeling of peripheral muscle fibre phenotypical and gene expression characteristics in COPD.

### Research Grants

1. **Project title:** Home rehabilitation via telemonitoring of vital signs to prevent exacerbations in patients with Chronic Obstructive Pulmonary Disease (COPD), Co-operation frame: 1438\_10  
**Acronym:** TELECARE  
**Source of funding:** General Secretariat of Research & Technology & European Commission  
**Role in the research team:** Principal investigator for the University of Athens.  
**Dates:** 2/1/2013– 31/1/2014
2. **Project title:** Physical Activity as a Crucial Patient Reported Outcome in COPD. Grant Agreement number: EC- Innovative Medicines Initiative Joint Undertaking IMI –JU -115011  
**Acronym:** PROACTIVE  
**Source of funding:** European Directorate for Research; Innovative Medicines Initiative (IMI)  
**Role in the research team:** Principal investigator for Greek side on behalf of Thorax Foundation – Research Centre of Intensive and Thoracic Medicine.  
**Dates:** 1/9/2009 – 31/8/2014
3. **Project title:** “Supporting healthier and independent living for Chronic Patients and Elderly; Contract N° 225025  
**Acronym:** NEXES  
**Source of funding:** ICT policy support programme; PILOT TYPE B – ICT-PSP-PB  
**Role in the research team:** Principal investigator for Greek side on behalf of a SME “SANTAIR”.  
**Dates:** 1/5/2008 – 31/5/2012
4. **Project title:** “A 24 week, randomized, double blind, placebo-controlled, multicenter study to evaluate the efficacy and safety of 18mcg of Tiotropium inhalations capsules administered once-daily plus PRN Salbutamol VS placebo plus PRN Salbutamol in Chronic Obstructive Pulmonary Disease subjects naïve to maintenance therapy”.  
**Source of funding:** *Pfizer*, Protocol number: A4471008/1067.  
**Role in the research team:** Co-Principle investigator  
**Dates:** 12/3/2009 – 15/9/2010
5. **Project title:** Effects of pulmonary rehabilitation on local muscle inflammation and insulin-like growth factor –I (IGF-I) in patients with chronic obstructive pulmonary disease.  
**Source of funding:** *Pfizer* Protocol number: GA 9000K5/2006.  
**Role in the research team:** Principal Investigator.  
**Dates:** 01/11/2006 – 31/3/ 2008
6. **Project title:** Respiratory kinematics during exercise in patients with severe COPD and aged-matched subjects.  
**Source of funding:** *Boehringer Ingelheim and Pfizer* , Protocol number: BI: 205.347/2005

**Role in the research team:** Principal Investigator.

**Dates:** 01/9/2005 – 31/12/ 2005

7. **Project title:** Computed Aided Rehabilitation for Respiratory Diseases (CARED).  
**Source of funding:** European Commission – Research Directorate. Contract No: QLG5 – CT – 2002 – 00893. FP5: Quality of Life and management of living resources program.  
**Role in the research team:** Greek principal investigator under the auspices of Prof. Ch. Roussos  
**Dates:** 01/10/2002 – 01/10/2005
  
8. **Project title:** Rehabilitation Strategies in patients with chronic obstructive pulmonary disease.  
**Source of funding:** Greek General Secretariat of Research and Technology and the European Union’s 4th Framework for Research and Development: “Return Grant to Greek Nationals Living Abroad”. Host Organization: University of Athens Medical School, Department of Critical Care Medicine.  
**Role in the research team:** Principal Investigator  
**Dates:** 01/01/1999 - 01/01/2002.
  
9. **Project title:** Evaluation of the benefits of long term rehabilitation strategies on physiological and psychosocial outcomes in patients with chronic obstructive pulmonary disease (COPD).  
**Source of funding:** Grants for Research and Development (R&D), Northern and Yorkshire Health Authority-NHS, UK  
**Role in the research team:** Principal Investigator  
**Dates:** 01/01/1997 - 01/01/1999.

#### **Invitation from International Scientific Societies to contribute to Position Statements and Textbooks**

- ✓ 2011-2012. American Thoracic Society/European Respiratory Society Official Statement on “**Pulmonary Rehabilitation for COPD patients**”.
- ✓ 2012-2013. American Thoracic Society/European Respiratory Society Official Statement on “**Skeletal Muscle Dysfunction in COPD patients**”.
- 2012. European Respiratory Society Official Statement on “**Physical activity in COPD patients**”.
- ✓ 2010. American Physiological Society, Physiological Reviews (Expansion of the existing *Textbook of Physiology*”. Series title: Exercise in health and disease, Section II: *Exercise Impairment in Chronic Disease*: Chapter title: “Factors limiting exercise tolerance in chronic lung diseases”. Authors: Vogiatzis I & Zakyntinos S.

#### **Publishing research achievements**

##### **Publications**

Manuscripts in peer review international journals	60
Total impact factor:	233
Citations	948
H index	19

*List of publications*

1. Louvaris Z, Kortianou EA, Spetsioti S, Vasilopoulou M, Nasis I, Asimakos A, Zakyntinos SG, **Vogiatzis I**. Intensity of daily physical activity is associated with central hemodynamic and leg muscle oxygen availability in COPD. **J Appl Physiol**. 2013 Jul 11. [Epub ahead of print] PMID: 23845982
2. **Vogiatzis I**, Zakyntinos S. The physiological basis of rehabilitation in chronic heart and lung disease. **J Appl Physiol**. 2013 Jul;115(1):16-21. doi: 10.1152/jappphysiol.00195.2013. Epub 2013 Apr 25.
3. Rabinovich RA, Louvaris Z, Raste Y, Langer D, Remoortel HV, Giavedoni S, Burtin C, Regueiro EM, **Vogiatzis I**, Hopkinson NS, Polkey MI, Wilson FJ, Macnee W, Westerterp KR, Troosters T. Validity of physical activity monitors during daily life in patients with COPD. **Eur Respir J**. 2013 Feb ; PMID: 23397303
4. **Vogiatzis I**, Zakyntinos G and Andrianopoulos V. **Mechanisms of Physical Activity Limitation in Chronic Lung Diseases** Pulmonary Medicine; Volume 2012, Article ID 634761, 11 pages doi:10.1155/2012/634761.
5. Nasis I, Kortianou EA, Clini E, Koulouris NG, **Vogiatzis I**. Effect of rehabilitative exercise training on peripheral muscle remodelling in patients with COPD: Targeting beyond the lungs. *Curr Drug Targets*. 2013'14'262-273.
6. Louvaris Z, Zakyntinos, Aliverti A S Habazettl H, Wagner H, Vasilopoulou M, Wagner PD, **Vogiatzis I**. Effect of helium breathing on peripheral muscle blood flow during exercise in COPD patients with different patterns of dynamic hyperinflation. **Journal of Applied Physiology** 2012; 113(7): 1012-1023.
7. P. Laveneziana, P. Palange, M. Decramer, L. Puente-Maestú, F. Maltais, R. Rabinovich, **I. Vogiatzis**, T. Troosters, H. Gosker, G. Scano, E. Barreiro. Physical activity and systemic inflammation in COPD": **European Respiratory Journal** 2012, 40(3): 522-529
8. Georgiopoulou VV, Dimopoulos S, Sakellariou D, Papazachou O, Gerovasili V, Tasoulis A, Agapitou V, **Vogiatzis I**, Roussos C, Nanas S. Cardiopulmonary Rehabilitation Enhances Heart Rate Recovery in Patients with COPD. **Respir Care**. 2012; PMID: 22710548
9. Van Remoortel H, Giavedoni S, Raste Y, Burtin C, Louvaris Z, Gimeno- Santos E, Langer D, Glendenning A, Hopkinson NS, **Vogiatzis I**, Peterson BT, Wilson F, Mann B, Rabinovich R, Puhan MS and Troosters T. Validity of activity monitors in health and chronic disease: a systematic review. **International Journal of Behavioral Nutrition and Physical Activity** 2012; Jul 9;9(1):84
10. Van Remoortel H., Giavedoni S., Rabinovich R, Raste Y., Louvaris Z., Langer D., Burtin Ch., Glendenning A., Hopkinson N., **Vogiatzis I**, Wilson F., Mann B., Gimeno E., Troosters T. Validity of six activity monitors in Chronic Obstructive Pulmonary Disease: a comparison of indirect calorimetry. **PLoS ONE** 2012; 7(6):e39198.
11. Anja Frei, Kate Williams, Anders Vetsch, Fabienne Dobbels, Laura Jacobs, Katja Rüdell and Milo A Puhan, **for the PROactive consortium**. A comprehensive systematic review of the development process of 104 patient-reported outcomes (PROs) for physical activity in chronically ill and elderly people. **Health and Quality of Life Outcomes** 2011, 9:116
12. Elena Gimeno-Santos, Anja Frei, Fabienne Dobbels, Katja Rüdell, Milo A Puhan and Judith Garcia-Aymerich, **for the PROactive consortium**. Validity of instruments to measure physical activity may be questionable due to a lack of conceptual frameworks: a systematic review. **Health and Quality of Life Outcomes** 2011, 9:86
13. **Vogiatzis I**, Louvaris Z., Habazett H., Andrianopoulos V., Wagner H., Roussos Ch., Wagner PD., Zakyntinos S. Cerebral cortex oxygen delivery and exercise limitation in patients with COPD. **European Respiratory Journal** 2013, 41(2):295-301
14. Vasilopoulou K.M., **Vogiatzis I**, Nasis I., Spetsioti S., Cherouveim E., Koskolou M., Kortianou E.A., Louvaris Z., Kaltsakas G., Koutsoukou A., Koulouris N.G., Alchanatis M. On- and off-exercise kinetics of cardiac output in response to cycling and walking in COPD patients with GOLD stages I to IV. **Respiratory Physiology and Neurobiology**, May 31;181(3):351-8
15. **Vogiatzis I** and Zakyntinos S. Factors Limiting Exercise Tolerance in Chronic Lung Diseases. **Comprehensive Physiology**, 2012: Vol 2, Issue 3: 1779-1817

16. Kortianou E, Nasis IG, **Vogiatzis I**. Exercise strategies for chronic respiratory diseases. **Minerva Pneumologica** 2011; 50: 111-128
17. **Vogiatzis I.**, Louvaris Z, Habazettl H, Athanasopoulos D, Andrianopoulos V, Cherouveim E, Wagner H, Roussos C, Wagner PD, Zakynthinos SG. Frontal cerebral cortex blood flow, oxygen delivery and oxygenation during normoxic and hypoxic exercise in athletes. **Journal of Physiology** 2011, 589: 4027-4039.
18. **Vogiatzis I**. Strategies of muscle training in very severe COPD patients. **European Respiratory Journal** 2011, Oct;38(4):971-5.
19. **Vogiatzis I.**, Andrianopoulos V., Louvaris Z., Cherouveim E., Spetsioti S., Vasilopoulou M., Athanasopoulos D. Quadriceps muscle blood flow and oxygen availability during repetitive bouts of isometric exercise in simulated sailing. **Journal of Sports Science** 2011, Jul;29(10):1041-9.
20. **Vogiatzis I**, Terzis G, Stratakos G, Cherouveim E, Athanasopoulos D, Spetsioti S, Nasis I, Manta P, Roussos C, Zakynthinos S. Effect of pulmonary rehabilitation on peripheral muscle fiber remodelling in COPD patients with GOLD stages II to IV. **Chest** 2011, 140: 744-752
21. **Vogiatzis I**, Habazettl H, Aliverti A, Louvaris Z, Athanasopoulos D, LoMauro A, Wagner H, Roussos Ch, Wagner PD, Zakynthinos S. Effect of helium breathing on intercostal and quadriceps muscle blood flow during exercise in COPD patients. **American Journal of Physiology Regulatory, Integrative and Comparative Physiology** 2011; Jun; 300(6):R1549-59
22. **Vogiatzis I**, Athanasopoulos D, Habazettl H, Aliverti A, Louvaris Z, Cherouveim E, Wagner H, Roussos Ch, Wagner PD, Zakynthinos S. Intercostal muscle blood flow limitation during exercise in chronic obstructive pulmonary disease. **American Journal Respiratory & Critical Care Medicine** 2010; 182: 1105-1113
23. Kortianou E, Nasis I, Spetsioti S, Daskalakis A, **Vogiatzis I**. Effectiveness of interval exercise training in patients with COPD. **Cardiopulmonary Physical Therapy Journal** 2010; 21(3): 12–19 / PMID: PMC2941353
24. Athanasopoulos D, Louvaris Z, Cherouveim E, Andrianopoulos V, Roussos C, Zakynthinos SG, **Vogiatzis I**. Expiratory muscle loading increases intercostal muscle blood flow during leg exercise in healthy humans. **Journal of Applied Physiology** 2010; 109(2):388-95.
25. Habazettl H, Athanasopoulos D, Kuebler WM, Wagner HE, Roussos C, Wagner PD, Ungruhe J, Zakynthinos SG, **Vogiatzis I**. Near-infrared spectroscopy and indocyanine green derived blood flow index for non-invasive measurement of muscle perfusion during exercise. **Journal of Applied Physiology** 2010; 108(4):962-7
26. **Vogiatzis I**, Simoes DC, Stratakos G, Kourepini E, Terzis G, Manta P, Athanasopoulos D, Roussos C, Wagner PD, Zakynthinos S. Effect of pulmonary rehabilitation on muscle remodelling in cachectic patients with COPD. **European Respiratory Journal** 2010; 36(2):301-10
27. **Vogiatzis I**, Zakynthinos S. Physical inactivity: common pathway to peripheral muscle weakness in chronic respiratory diseases? **European Respiratory Journal** 2009; 34: 1213-1214
28. **Vogiatzis I**, Athanasopoulos D, Stratakos G, Garagouni C, Koutsoukou A, Boushel R, Roussos C, Zakynthinos S. Exercise-induced skeletal muscle deoxygenation in O<sub>2</sub>-supplemented COPD patients. **Scandinavian Journal of Medicine & Science in Sports** 2009; 19: 364-372
29. **Vogiatzis I**, Athanasopoulos D, Habazettl H, Kuebler WM, Wagner H, Roussos C, Wagner PD, Zakynthinos S. Intercostal muscle blood flow limitation in athletes during maximal exercise. **Journal of Physiology** 2009; 587: 3665-3677
30. Golemati S, Moupagiatzis I, Athanasopoulos D, Vasilopoulou M, Roussos C, **Vogiatzis I**. Comparative analysis of phase difference estimation methods quantifying asynchronies between compartmental chest wall volume signals. **Conf Proc IEEE Engineering in Medicine & Biology Soc** 2009; 2871-2874
31. Nasis IG, **Vogiatzis I**, Stratakos G, Athanasopoulos D, Koutsoukou A, Daskalakis A, Spetsioti S, Evangelodimou A, Roussos Ch. and Zakynthinos S. Effects of interval-load versus constant-load training on the BODE index in COPD patients. **Respiratory Medicine** 2009; 103(9) 1392-1398
32. West J, Wagner PD, Neder A, Scano A, Jones N, Zakynthinos S, **Vogiatzis I**, Nici L, Calverley P, Gosker H, Schols A, Palange P, Marciniuk D. and Butcher S. The major limitation to exercise performance in COPD is inadequate energy supply to the respiratory and locomotor muscles vs. lower limb muscle dysfunction vs. dynamic hyperinflation. **Journal of Applied Physiology** 2008; 105: 758-762.

33. Castagna O, Brisswalter J, Lacour JR, **Vogiatzis I**. Physiological demands of different sailing techniques of the new Olympic windsurfing class. **European Journal of Applied Physiology** **2008**; 104: 1061-1067
34. **Vogiatzis I**. Prescription of exercise training in patients with COPD. **Current Respiratory Medicine Reviews** **2008**; 4, 291-297
35. **I. Vogiatzis**, D. Athanasopoulos, R. Boushel, JA. Guenette, M. Koskolou, M. Vasilopoulou, H. Wagner, C. Roussos, PD. Wagner and S. Zakyntinos. Contribution of respiratory muscle blood flow to exercise-induced diaphragmatic fatigue in trained cyclists. **Journal of Physiology** **2008**; 586: 5575-5587.
36. **Vogiatzis I**, Zakyntinos S, Boushel R, Athanasopoulos D, Guenette JA, Wagner H, C Roussos and PD Wagner. The contribution of intrapulmonary shunts to the alveolar to arterial oxygen difference is very small. **Journal of Physiology** **2008**; 586: 2381-2391.
37. J.A. Guenette, **I. Vogiatzis**, S. Zakyntinos, D. Athanasopoulos, M. Koskolou, S. Golemati, M. Vasilopoulou, H. E. Wagner, C. Roussos, P. D. Wagner R. Boushel. Human respiratory muscle blood flow measured by near-infrared spectroscopy and indocyanine green. **Journal of Applied Physiology** **2008**; 104:1202-1210.
38. Terzis G, Georgiadis G, Stratakos G, **Vogiatzis I**, Kavouras S, Manta P, Mascher H, Blomstrand E. Resistance exercise-induced increase in muscle mass correlates with p70S6 kinase phosphorylation in human subjects. **European Journal of Applied Physiology** **2008** Jan; 102(2): 145-52.
39. **Vogiatzis I**, Tzineris D, Athanasopoulos D, Georgiadou O, Geladas N. Quadriceps Oxygenation during Isometric Exercise in Sailing. **International Journal of Sports Medicine** **2008** Jan; 29(1): 11-15.
40. **I. Vogiatzis**, G. Stratakos, D. Athanasopoulos, O. Georgiadou, S. Golemati, A. Koutsoukou, I. Weisman, C. Roussos, S. Zakyntinos. Chest wall volume regulation during exercise in COPD patients with GOLD stages II to IV. **European Respiratory Journal** **2008**; 32: 1-12
41. **I. Vogiatzis**, O. Georgiadou, M. Koskolou, D. Athanasopoulos, K. Kostikas, S. Golemati, H. Wagner, C. Roussos, PD. Wagner, S. Zakyntinos. Effects of hypoxia on diaphragmatic fatigue in highly trained athletes. **Journal of Physiology** **2007**; 581 (1) 299–308.
42. Vangelakoudi A, **Vogiatzis I**, Geladas N. Anaerobic capacity, isometric endurance, and Laser sailing performance. **Journal of Sports Sciences** **2007**; 25: 1095-110
43. Georgiadou O, **Vogiatzis I**, Stratakos G, Koutsoukou A, Golemati S, Aliverti A, Roussos C, Zakyntinos S. Effects of rehabilitation on chest wall volume regulation during exercise in COPD. **Eur Respir J**. 2007;29(2):284-91
44. **I. Vogiatzis**, S. Zakyntinos, O. Georgiadou, S. Golemati, A. Pedotti, P. Macklem, C. Roussos, A. Aliverti. Oxygen kinetics and debt during recovery from expiratory flow-limited exercise in healthy humans. **European Journal of Applied Physiology** **2007**; 99(3):265-74.
45. **I. Vogiatzis**, G. Stratakos, DCM Simoes, G. Terzis, O. Georgiadou, C. Roussos, S. Zakyntinos. Effects of rehabilitative exercise on peripheral muscle TNF $\alpha$ , IL-6, IGF-I and MyoD expression in patients with COPD. **Thorax** **2007**; 62:950–956.
46. Roditis P, Dimopoulos S, Sakellariou D, Sarafoglou S, Kaldara E, Venetsanakos J, **Vogiatzis I**, Anastasiou-Nana M, Roussos C, Nanas S. The effects of exercise training on the kinetics of oxygen uptake in patients with chronic heart failure. **European Journal of Cardiovascular Prevention & Rehabilitation** **2007**; 14(2): 304-11.
47. **I. Vogiatzis**, O. Georgiadou, I. Giannopoulou, M. Koskolou, S. Zakyntinos, K. Kostikas, E. Kosmas, H. Wagner, E. Peraki, A. Koutsoukou, N. Koulouris, P. D. Wagner, C. Roussos. Effects of exercise-induced arterial hypoxaemia and work rate on diaphragmatic fatigue in highly trained endurance athletes. **Journal of Physiology** **2006**; 572: 539-549.
48. Dimopoulos S, Anastasiou-Nana M, Sakellariou Dimitrios, Drakos S, Kapsimalakou S, Maroulidis G, Roditis P, Papazahou O, **Vogiatzis I**, Roussos C, Nanas S. Effects of exercise rehabilitation program on heart rate recovery in patients with chronic heart failure. **European Journal of Cardiovascular Prevention & Rehabilitation** **2006**; 13: 67-73.
49. **I. Vogiatzis**, G. De Vito, A. Rodio, M. Marchetti. Comparison of the physiological responses to upwind and downwind sail-pumping in windsurfers. **New Zealand Journal of Sports Medicine** **2005**; 33(2): 66-69.

50. **I. Vogiatzis**, A. Aliverti, S. Golemati, O. Georgiadou, A. LoMauro, E. Kosmas, E. Kastanakis, C. Roussos. Respiratory kinematics by optoelectronic plethysmography during exercise in men and women. **European Journal of Applied Physiology** **2005**; 93: 581-587.
51. **Vogiatzis I**, Terzis G, Nanas S, Stratakos G, Simoes DCM, Georgiadou O, Zakyntinos S, Roussos C. Skeletal muscle adaptations to interval training in patients with advanced COPD. **Chest** **2005**; **128**: 3838-3845.
52. **Vogiatzis I**, Georgiadou O, Golemati S, Aliverti A, Kosmas E, Kastanakis E, Geladas N, Koutsoukou A, Nanas S, Zakyntinos S, Roussos C. Patterns of dynamic hyperinflation during exercise and recovery in patients with severe chronic obstructive pulmonary disease. **Thorax** **2005**; 60(9):723-729. 2005.
53. **Vogiatzis I.**, Nanas S., Kastanakis E, Georgiadou O., Papazahou O., Roussos Ch. Dynamic hyperinflation and tolerance to interval exercise in patients with advanced COPD. **European Respiratory Journal** **2004**; 24(3):385-90.
54. **Vogiatzis I.**, G. De Vito, A. Rodio, A. Madaffari, and M. Marchetti. The Physiological Demands of Sail Pumping on Olympic Class Windsurfers. **European Journal of Applied Physiology**; **2002**; 86: 450-454.
55. **I. Vogiatzis**, S. Nanas, Ch. Roussos. Interval training as an alternative modality to continuous exercise in patients with COPD: **European Respiratory Journal** **2002**; 20(1): 12-19.
56. Gratiou C, Rovina N, Lignos M, **Vogiatzis I**, and Roussos C. Exhaled nitric oxide in seasonal allergic rhinitis in and out of pollen season. Effect of steroid and non-steroid anti-inflammatory treatment. **Clinical and Experimental Allergy**; **2001**; 31(3): 409-416
57. **I. Vogiatzis**, A. Williamson, J. Miles, and I. Taylor. Physiological response to moderate exercise workloads in a pulmonary rehabilitation program in patients with varying degrees of airflow obstruction. **Chest** **1999**; 116: 1200-1207.
58. **Vogiatzis I**, Spurway NC, Jennett S, Wilson J, Sinclair. Changes in ventilation in electromyographic activity during repetitive bouts of isometric exercise in simulated sailing **European Journal of Applied Physiology**; **1996**, 72(3): 195-203.
59. **Vogiatzis I.**, Spurway N. C., Wilson J., Boreham C. Assessment of aerobic and anaerobic demands of dinghy sailing at different wind velocities. **Journal of Sports Medicine and Physical Fitness**; **1995**, 35(2): 103-107.
60. **Vogiatzis I.**, Roach N. K., Trowbridge E. A. Cardiovascular, muscular and blood lactate responses during dinghy 'hiking'. **Medical Science Research**; **1993**, 21: 861-863.

#### **Editorial articles published for manuscripts authored**

1. **Gosselink R.** Respiratory rehabilitation: improvement of short- and long-term outcome. **Eur Respir J.** 2002 Jul; 20(1):4-5. **For the paper: I. Vogiatzis**, S. Nanas, Ch. Roussos. Interval training as an alternative rehabilitative modality to continuous exercise in patients with COPD: **Eur Respir J** **2002**; 20(1): 12-19.
2. **Kuebler WM.** How NIR is the future in blood flow monitoring? **J Appl Physiol.** 2008 Apr;104(4):905-6. **For the paper: J.A. Guenette, I. Vogiatzis**, S. Zakyntinos, D. Athanasopoulos, M. Koskolou, S. Golemati, M. Vasilopoulou, H. E. Wagner, C. Roussos, P. D. Wagner R. Boushel. Human respiratory muscle blood flow measured by near-infrared spectroscopy and indocyanine green. **J Appl Physiol** **2008**; 104:1202-1210.

**3. Secher NH, Richardson RS.** A large slice of cardiac output or humble pie for the respiratory muscles? *J*

*Physiol.* 2009 Jul 15; 58:3411. **For the paper: Vogiatzis I,** Athanasopoulos D, Habazettl H, Kuebler WM,

Wagner H, Roussos C, Wagner PD, Zakynthinos S. Intercostal muscle blood flow limitation in athletes

during maximal exercise. *J Physiol* **2009**; 587: 3665-3677.

**4. Secher NH, Fisher JP.** Brain at work. *J Physiol.* 2011 Aug 15; 589:4405. **For the paper: Vogiatzis I.,**

Louvaris Z, Habazettl H, Athanasopoulos D, Andrianopoulos V, Cherouveim E, Wagner H, Roussos C,

Wagner PD, Zakynthinos SG. Frontal cerebral cortex blood flow, oxygen delivery and oxygenation during

normoxic and hypoxic exercise in athletes. *Journal of Physiology* **2011**, 589: 4027-4039.

### Invited talks

**1. ATS 2013 International Conference:** Postgraduate Course entitled “Key Concepts and Advances in Practical Pulmonary Rehabilitation’ held May 17-22, 2013 in Philadelphia, Pennsylvania. Title of presentation: Update in the Science Of Exercise Training: “The Usual Suspects And The New Kids On The Block”.

**2. Royal Brompton Hospital/National Heart & Lung Institute** – Title of Symposium: *Advances in Respiratory Medicine 2012*. Title of presentation: “Factors limiting exercise tolerance in COPD”. 24<sup>th</sup> April 2012, London, UK.

**3. European Respiratory Society (ERS) Research Seminar 2011.** Title of Seminar: *Physical activity, nutritional status and systemic inflammation in COPD*. Topic: Low-intensity and high-intensity exercise training in COPD: which one is more beneficial? 11<sup>th</sup> – 12<sup>th</sup> November 2011, Florence, Italy

**4. European Respiratory Society (ERS) Research Seminar 2011.** Title of Seminar: *Physical activity, nutritional status and systemic inflammation in COPD* Title: Exercise Strategies for Chronic Respiratory Disease. Topic: Rationale for endurance training: is the interval training the answer? 11<sup>th</sup> – 12<sup>th</sup> November 2011, Florence, Italy

**5. Belgian Society for Respiratory Physiotherapy Symposium.** Title: Rehabilitation for the lung patient. Topic: Optimizing training. Time to give our patients` doping? 25<sup>th</sup> March 2011, Leuven Belgium.

**6. Katholieke University of Leuven, Belgium.** *Post-graduate course on “Adapted Physical Activity”*. Hot Topic: «Competition between respiratory and locomotor muscles for the available energy supplies during exercise. From elite cyclists to Patients with COPD. 26<sup>th</sup> March 2011, Leuven, Belgium



- 7. European Respiratory Society Annual Congress 2011.** *Symposium title:* Exercise Training. *Topic:* Rationale for endurance training. Is the interval training the answer?. 25-29<sup>th</sup> September 2011 Amsterdam, Holland.
- 8. 15<sup>th</sup> State of the Art, Interdisciplinary Review Course.** Symposium on Pulmonary Rehabilitation: Effect of exercise training in COPD with GOLD Stages II to IV. Athens, 7-9 April 2011
- 9. European Respiratory Society Annual Congress 2010.** Hot Topic: Exercise Testing. *Title of presentation:* Blood flow to respiratory muscles during exercise in COPD. 19<sup>th</sup> September 2010 Barcelona, Spain.
- 10. Experimental Biology Annual Meeting 2010. FASEB meeting.** Symposium: Interaction between respiratory and limb muscle blood flow during exercise. *Presentation title:* Respiratory and leg muscle blood flow during cycle exercise. 24<sup>th</sup>- 28<sup>th</sup> 2010 Anaheim, Los Angeles, California, USA.
- 11. European Respiratory Society Research Seminars 2007.** *Topic:* *The Limits to Exercise in COPD.* New insights from new methods. *Presentation title:* Pulmonary Rehabilitation in patients with COPD. 27<sup>th</sup> and 28<sup>th</sup> September 2007, Como, Italy
- 12. European Respiratory Society Research Seminars 2007.** *Topic:* *The Limits to Exercise in COPD.* New insights from new methods. *Presentation title:* Muscle Biopsies in patients with COPD. 27<sup>th</sup> and 28<sup>th</sup> September 2007, Como, Italy
- 13. 2<sup>nd</sup> European Respiratory Care Association Congress.** *Topic:* Pulmonary Rehabilitation in COPD. *Presentation title:* How to identify patients indicated for a pulmonary rehabilitation program. 29-31 October, 2006, Athens
- 14. 10<sup>th</sup> State of the Art, Interdisciplinary Review Course.** *Topic:* Systemic effects in COPD patients. *Presentation title:* Effects of pulmonary rehabilitation on local muscle inflammation. 21-23 April, 2006, Athens
- 15. 9<sup>th</sup> State of the Art, Interdisciplinary Review Course.** *Topic:* Impact of acute and chronic conditions of hypoxia on exercise performance. *Presentation title:* Effects of arterial oxygen de-saturation on exercise-induced diaphragmatic fatigue in elite Greek cyclists. 21-23 April, 2005, Athens
- 16. 9<sup>th</sup> State of the Art, Interdisciplinary Review Course.** *Topic:* Disease of the airways: optimizing functional capacity. *Presentation title:* The impact of pulmonary rehabilitation on patients functional capacity, 21-23 April, 2005, Athens
- 17. 8<sup>th</sup> State of the Art, Interdisciplinary Review Course.** *Workshop:* Pulmonary rehabilitation in COPD. *Presentation title:* Exercise training programs, 7-9 May, 2004, Athens

**18. 2004 Pre-Olympic Congress, Workshop:** Performance in Aquatic Sports, *Presentation title:* Physiological assessment of Olympic Class sailors, 6-11 August 2004, Thessalonica.

**19. American College of Chest Physicians, 70<sup>th</sup> Annual Meeting.** Topic: Pulmonary Rehabilitation: the European model. *Presentation title:* Pulmonary rehabilitation settings. Seattle, USA, 23-28, October 2004.

**20. 7<sup>th</sup> European Practicum on Clinical Exercise Testing.** Tutorials and workshops. Title: Pathophysiology limiting exercise tolerance, Athens, October 13-15 2003.

**21. 7<sup>th</sup> Annual Congress of the European College of Sports Science.** Topic: Aquatic sport Physiology. *Presentation title:* Physiological demand of Olympic class sailing and implications for training modalities. Athens 24-28 July 2002.

#### Organizational abilities

- i. **2009:** Assembling a centre for pulmonary rehabilitation for patients with chronic obstructive pulmonary disease and chronic heart failure at the 1<sup>st</sup> Department of Respiratory Medicine of the National & Kapodistrian University of Athens, at Sotiria General Hospital in Athens.
- ii. **2004:** Assembling a centre for pulmonary rehabilitation for patients with chronic obstructive pulmonary disease at the 1<sup>st</sup> Department of Critical Care and Respiratory Medicine Department of the National & Kapodistrian University of Athens, at Evangelismos General Hospital in Athens.
- iii. **2003:** Assembling a laboratory for clinical exercise testing for patients with cardiopulmonary diseases at M. Simou and G.P. Livanos Laboratories at the 1<sup>st</sup> Department of Critical Care and Respiratory Medicine Department of the National & Kapodistrian University of Athens, at Evangelismos General Hospital in Athens.
- iv. **1999:** Assembling a centre for pulmonary rehabilitation for patients with chronic obstructive pulmonary disease and chronic heart failure at the Department of Thoracic Medicine of the National & Kapodistrian University of Athens, at Eugenitionl Hospital in Athens.
- v. **1996:** Assembling a centre for pulmonary rehabilitation for patients with chronic obstructive pulmonary disease at the Department of Respiratory Medicine of the General County Hospital of Sunderland, Northern England, UK
- vi. **1996:** Assembling a laboratory for exercise testing for healthy individuals and athletes at the University of Sunderland, the Department of Health Sciences. The laboratory and its services were endorsed by the British Association for Sport and Exercise Sciences (BASES).

#### Supervision of Postgraduate research fellows

*Postgraduate fellows who have completed Ph.D. degrees*

- ✓ Andy Williamson, 1995-1999, Thesis title: “*Evaluation of the benefits of long-term rehabilitation strategies in patients with COPD*”, registered at the University of Sunderland, UK.
- ✓ Olga Georgiadou, 2000-2005, Thesis title: “*Effects of Pulmonary Rehabilitation on exercise-induced dynamic hyperinflation in patients with COPD*” registered at the University of Athens.

- ✓ Dimitrios Athanasopoulos, 2004-2009, Thesis title: “*Competition for blood flow between respiratory and locomotor muscles in patients with COPD*” registered at the University of Athens.
- ✓ Currently 3 more Ph.D. fellows (namely: I. Nasis, E. Kortianou & Z. Louvaris) conduct research under my supervision who are registered at the University of Athens.

*Postgraduate fellows who have completed M.Sc. degrees*

- ✓ Seven (7) M.Sc. students registered at the University of Athens have completed their master thesis under my supervision.

#### Postgraduate teaching

2006-2011: University of Thessaly, Department of Physical Education & Sports Sciences, M.Sc. course in “Exercise in Health & Disease”, module on “Therapeutic exercise in patients with chronic lung diseases”

2008-2011: University of Athens, Department of Physical Education & Sports Sciences, M.Sc. course in “Biology of Exercise”, module on Clinical Exercise Testing & Cardiopulmonary Rehabilitation”

#### Awards

- ✓ **2002:** First award for best presentation at the 3<sup>rd</sup> Hellenic Congress of Chronic Heart Failure. Presentation title: “Interval versus continuous rehabilitative exercise training in patients with heart failure I. Vogiatzis, S. Nanas, D. Sakellariou, C. Kasiotis, O. Papazaxou, O. Georgiadou, I. Terovitis, A. Dalianis, S. Drakos, P. Roditis, I. Nanas, C. Roussos”.
- ✓ **2002:** Third award for best presentation at 6<sup>th</sup> International Congress “State of the Art; Interdisciplinary review course”. Presentation title: “Interval exercise as an alternative modality to continuous exercise in patients with severe COPD. I. Vogiatzis, S. Nanas, E. Kastanakis, O. Georgiadou, O. Papazahou, P. Roditis and Ch. Roussos.
- ✓ **2005:** Award to Ph.D. fellow (Ms. O. Georgiadou) by the European Respiratory Society (ERS) for best abstract for the study entitled: “Effects of pulmonary rehabilitation on dynamic hyperinflation during exercise in severe COPD patients. O. Georgiadou O, I. Vogiatzis, S. Golemati, E. Kastanakis, S. Nanas, C. Roussos. At the 15<sup>th</sup> ERS congress, Copenhagen, Denmark
- ✓ **2006:** Award to Ph.D. fellow (Ms. O. Georgiadou) by the European Respiratory Society (ERS) for best abstract for the study entitled: “Effects of pulmonary rehabilitation on operational chest wall volumes during exercise in COPD patients. O. Georgiadou, I. Vogiatzis, G. Stratakos, A. Koutsoukou, S. Golemati, A. Aliverti, S. Zakyntinos, C. Roussos at the 16<sup>th</sup> ERS Congress, Munich, Germany.
- ✓ **2010:** Award to Ph.D. fellow (Mr. Z. Louvaris) by the European Respiratory Society (ERS) for best abstract for the study entitled: “Effect of different patterns of exercise-induced dynamic hyperinflation on central hemodynamic and peripheral muscle oxygenation responses in COPD”. Louvaris Z, Athanasopoulos D, Vasilopoulou M, Andrianopoulos V, Cherouveim E, Spetsioti S, Koutsoukou A, Koskolou M, Roussos C, Zakyntinos S, **Vogiatzis I**, at the 20<sup>th</sup> ERS, Barcelona, Spain.
- ✓ **2012** Award to Ph.D. fellow (Mr. Vasilis Andrianopoulos) of a 12-month European Respiratory Society Research Fellowship to perform research at the University of Maastricht in the area of pulmonary rehabilitation in patients with COPD.
- ✓ **2013** “Excellence Grant in Clinical Physiology and Exercise” awarded to a Ph.D. fellow (Ms. Eleni Kortianou) by the European Respiratory Society for the abstract entitled: “Mechanical restriction to tidal volume expansion partially determines intensity of physical activity in COPD” E. Kortianou, M. Vasilopoulou, Z. Louvaris, I. Nasis, S. Spetsioti, V. Andrianopoulos, G. Kaltsakas, N. G. Koulouris, **I. Vogiatzis**, at the 23<sup>th</sup> ERS congress, Barcelona, Spain.
- ✓ **2013:** Travel grant to Ph.D. fellow (Mr. Z. Louvaris) by the European Respiratory Society (ERS) for best abstract for the study entitled: “Intensity of physical activity is associated with central hemodynamic and leg muscle oxygenation capacities in COPD” **Z. Louvaris**, E. Kortianou, S. Spetsioti, M. Vasilopoulou, I. Nasis, A. Asimakos, C. Roussos, S. Zakyntinos, **I. Vogiatzis** at the 23<sup>th</sup> ERS congress, Barcelona, Spain.