

CURRICULUM VITAE

Name: Rachel Sarig PhD, DMD

Department of Orthodontics, the Maurice and Gabriela Goldschleger School of Dental Medicine, Faculty of Medicine, Tel Aviv University, Israel

The Dan David Center for Human Evolution and Biohistory, the Steinhardt Museum of Natural History and National Research Center

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EDUCATION

- 2000-2002 Bachelor's degree in medical science B.Med.Sc. The Sackler Faculty of Medicine, Tel Aviv University
- 2003-2005 Doctor of dental Medicine (DMD), Thesis title: "The Relationship between Oral Parafunctions, Emotional Stress and Temporo-Mandibular Disorders among Under-Graduate Dental Students" under the supervision of Dr. Efraim Winocur and Dr. Roni Bat. The Maurice and Gabriela Goldschleger School of Dental Medicine, Faculty of Medicine, Tel Aviv University
- 2005-2010 Doctor of Philosophy (PhD), Thesis title: "Inter-proximal Dental Attrition Pattern: Etiology and Physiology" under the supervision of Prof. Alexander Dan Vardimon and Prof. Israel Hershkovitz. Department of Anatomy and Anthropology, The Sackler Faculty of Medicine and the Department of Orthodontics, The Maurice and Gabriela Goldschleger School of Dental Medicine, Tel Aviv University

FURTHER STUDIES

- 2008-2012 Post graduate international program in Orthodontics, graduated with excellence. Department of Orthodontics, the Maurice and Gabriela Goldschleger School of Dental Medicine, Tel Aviv University
- 2012-2014 Postdoctoral fellow. Anthropological collection, Sackler Faculty of Medicine, Tel Aviv University

ACADEMIC EXPERIENCE

- 2006-2008 Clinical instructor in the courses of "Morphology and Occlusion", Department of Oral Rehabilitation, The Maurice and Gabriela Goldschleger School of Dental Medicine, Tel Aviv University
- 2013- Coordinator of "Growth and development" course for undergraduate and postgraduate students. Department of Orthodontics, the Maurice and Gabriela Goldschleger School of Dental Medicine, Tel Aviv University
- 2014- Teaching in the course of "Dental Morphology and Anthropology" for undergraduate students. Department of Oral Rehabilitation, the Maurice and Gabriela Goldschleger School of Dental Medicine, Tel Aviv University
- Oct 2014 Lecturer, the Maurice and Gabriela Goldschleger School of Dental Medicine, Tel Aviv University
- PI, Dental Anthropology and Orthodontic Laboratory, the Maurice and Gabriela Goldschleger School of Dental Medicine, Tel Aviv University, and the Dan David Center for Human Evolution and Biohistory, the Steinhardt Museum of Natural History and National Research Center, Tel Aviv University

ACTIVE PARTICIPATION IN CONGRESSES

- 2005 International association of dental research (IADR), Israel. "The Relationship between Oral Parafunctions, Emotional Stress and Temporo-Mandibular Disorders among Under-Graduate Dental Students" (oral presentation)
- 2008 The 8th Research Fair of the Sackler Faculty of Medicine, Israel. "Interproximal Facet in the Posterior Dentition: Elusive Phenomenon with Clinical Importance" (poster)

- 2009 17th Congress of the International Federation of Associations of Anatomists, Capetown. " Metric and Morphologic Characteristics of Dental Interproximal Contacts in the Permanent Dentition: Clinical Study" (poster)
- 2010 Research forum in the name of Morris and Gabriela Goldshlager:Updates and innovations in current dentistry, Israel . "Inter-proximal Dental Attrition Pattern:Etiology and Physiology" (oral presentation)
- 2011 The 87th Congress of the European Orthodontic Society. Turkey. "The Interproximal Interfaces (IPI) of the Human Permanent Dentition" (poster)
- 2013 The annual conference of the Israel Orthodontic Society, Israel. " Pattern of maxillary and mandibular proximal enamel width at the contact area of the permanent dentition" (oral presentation)
- 2013 The International association of dental research (IADR), Israel." The arrangement of the interproximal interfaces in the human permanent dentition" (oral presentation)
- 2014 The 16th International Symposium on Dental Morphology and 1st Congress of the International Association for Paleodontology, Zagreb, Croatia. "Parafacets in Middle Paleolithic dentitions: questioning their usefulness for behavior reconstruction" (oral presentation)
- 2014 The Union Internationale des Sciences Préhistoriques et Protohistoriques – UISPP, Burgos, Spain. "How Did the Qesem People Use their Teeth?" (oral presentation).
- 2014 The Israeli Dental Association, Tel Aviv, Israel. "Pattern of maxillary and mandibular proximal enamel thickness at the contact area of the permanent dentition" (oral presentation).
- 2015 The annual meeting of the European Society for the study of Human Evolution (ESHE), London, UK. "Interproximal wear patterns of the Middle Pleistocene (420-200 kyr)" (poster presentation).

MEMBERSHIP IN PROFESSIONAL SOCIETIES

- 2005- Israeli Dental Association
- 2008- Israeli Orthodontic Society

- 2009- American Association of Orthodontists
- 2013- International association of dental research
- 2014- The International Association for Paleodontology
- 2015- Alpha Omega Faternity
- 2015- ESHE- European Society for the study of Human Evolution

GRANTS

- 2007- Fulbright the United States-Israel Educational Foundation (USIEF). Main investigator: R. Sarig
- 2008- Dr. Herman Schauder Memorial Endowment Fund of the Sackler Faculty of Medicine Tel Aviv University. Main investigator: I. HersHKovitz, Co-researcher: A. Vardimon, R. Sarig
- 2011- Turnheim Foundation Research Grant. Main investigator: N. Shpack; Co-researcher: A. Vardimon, R. Sarig
- 2012- Rothstein Foundation Grant. Main investigator: N. Shpack; Co-researcher: A. Vardimon, R. Sarig
- 2012- Align Research Grant (Invisalign), Germany. Main investigator: A. Vardimon; Co-researcher: N. Shpack, R. Sarig
- 2013- Turnheim Foundation Research Grant. Main investigator: N. Shpack; Co-researcher: R. Sarig, T. Brosh, Y. Gabet, A. Vardimon

SCIENTIFIC PUBLICATIONS

1. I. Hershkovitz, P. Smith, **R. Sarig**, R. Quam, L. Rodríguez, R. García, JL. Arsuaga, R. Barkai, A. Gopher. Middle Pleistocene dental remains from Qesem Cave (Israel). *American Journal of Physical Anthropology*, Vol. 144, pp. 575–592, 2011.
2. **R. Sarig**, N. Lianopoulos, I. Hershkovitz, AD. Vardimon. The Arrangement of the Interproximal interface in the Human Permanent Dentition. *Clinical Oral Investigation*, Vol. 17 pp. 731–738, 2013.
3. J. Abbas, K. Hamoud, H. May, N. Peled, **R. Sarig**, D. Stein, D. Alperovitch-Najenson, I. Hershkovitz. Socioeconomic and physical characteristics of degenerative lumbar spinal stenosis individuals. *Spine*, Vol. 38 pp. 554-556, 2013.
4. N. Shpack, RG. Bar-Ness, D. Gazit, **R. Sarig**, AD. Vardimon. Efficacy of three hygienic protocols in reducing biofilm adherence to removable thermoplastic appliance. *Angle orthodontics*, Vol. 84 pp. 161-170, 2013.
5. **R. Sarig**, V. Slon, J. Abbas, H. May, N. Shpack, AD. Vardimon, I. Hershkovitz. Malocclusion in Early Anatomically Modern Human: a Reflection on the Etiology of Modern Dental Misalignment. *PloS One*, Vol. 8(11), e80771, doi: 10.1371/journal.pone.0080771, 2013.
6. V. Slon, **R. Sarig**, I. Hershkovitz, H. Khalaily, I. Milevski. The plastered skulls from the Pre-Pottery Neolithic B site of Yiftahel (Israel) - A Computed Tomography-based Analysis. *PloS One*, Vol. 9(2), e89242 doi: 10.1371/journal.pone.0089242, 2014.
7. **R. Sarig**, AM. Tillier. Reconstructing Cultural Behavior from Dental Wear studies: Is para-facets analysis approach scientifically valid? *HOMO-Journal of Comparative Human Biology*, 65(3), 181-186. 2014.
8. **R. Sarig**, I. Hershkovitz, N. Shvalb, T. Sella-Tunis, H. May, AD. Vardimon. Proximal Attrition Facet: morphometric, demographic and aging characteristics *European Journal of Oral Sciences* Vol. 122 (4) pp. 271-278, 2014.

9. Hershkovitz, I., Spigelman, M., **Sarig, R.**, Lim, D. S., Lee, I. S., Oh, C. S., ... & Shin, D. H. A Possible Case of Cherubism in a 17th-Century Korean Mummy. *PLoS one*, 9(8), e102441. 2014
10. Shpack, N., Brosh, T., Mazor, Y., Shapinko, Y., Davidovitch, M., **Sarig, R.**, Reimann, S., Bourauel, C., Vardimon, A. D. Long-and short-term effects of headgear traction with and without the maxillary second molars. *American Journal of Orthodontics and Dentofacial Orthopedics*, 146(4), 467-476. 2014
11. Levartovsky, S., Matalon, S., **Sarig, R.**, Baruch, O., & Winocur, E. The association between dental wear and reduced vertical dimension of the face: a morphologic study on human skulls. *Archives of oral biology*, 60(1), 174-180. 2014
12. **Sarig, R.**, Vardimon, A.D., Sussan, S., Benny, L., Sarne, O., Hershkovitz I., Nir, S., Pattern of maxillary and mandibular proximal enamel thickness at the contact area of the permanent dentition from first molar to first molar. *American Journal of Orthodontics and Dentofacial Orthopedics*. 147(4), 435-444. 2014.
13. **Sarig, R.**, Hershkovitz I., Nir, S., May H., Vardimon, A.D. Rate and pattern of Inter-Proximal Dental Attrition. *European Journal of Oral Sciences* 123(4), 276-281. 2015.
14. Hardy K., Radini A., Buckley., **Sarig R.**, Copeland L., Gopher A., Barkai R. Dental calculus reveals potential respiratory irritants and ingestion of essential plant-based nutrients at Lower Palaeolithic Qesem Cave Israel. *Quaternary International* 2015 (on line)
15. Hershkovitz, I., Weber, G.W., Fornai, C., Gopher, A., Barkai, R., Slon, V., Quam, R., Gabet, Y., **Sarig R.** New Middle Pleistocene dental remains from Qesem Cave (Israel) *Quaternary International* 2015 (on line).
16. **Sarig, R.**, Gopher, A., Barkai, R., Rosell, J., Blasco, R., Weber, G.W., Fornai, C., Sella-Tunis, T., Hershkovitz, I. How Did the Qesem Cave People Use their Teeth? Analysis of Dental Wear Patterns. *Quaternary International* (ACCEPTED) 2015.
17. Weber, G.W. Fornai, C., Gopher, A., Barkai, R., **Sarig, R.** & Hershkovitz, I. The Qesem cave hominin material (Part 1): A morphometric analysis of the mandibular premolars and molar. *Quaternary International* (ACCEPTED) 2015.

Abstracts presented at scientific meetings

1. **Sarig R**, May H, Abbas J, Cohen H, Shpack N, Hershkovitz I, Vardimon AD. Interproximal Concave-Convex Pattern in the Posterior Dentition: Association to Malocclusions. Abstract book of the 8th research fair of the Sackler Faculty of Medicine, pp. 157. Tel-Aviv University, Israel. 2008.
2. May H, Peled N, Hay O, **Sarig R**, Abbas J, Hershkovitz I. Hyperostosis Frontalis Interna: Prevalence and Severity in Contemporary Populations. Abstract book of the 8th research fair of the Sackler Faculty of Medicine, pp. 10. Tel-Aviv University, Israel. 2008.
3. Weber GW, Fornai C, Gopher A, Barkai R, **Sarig R**, Hershkovitz I. The Qesem Cave dental material: A first morphometric analysis based on μ CT images of mandibular teeth. The abstract book of the annual meeting of the European Society for the study of Human Evolution (ESHE), Austria. 2013.
4. **Sarig R**, Tillier AM, Vardimon AD, Hershkovitz I. Parafacets in Middle Paleolithic dentitions: questioning their usefulness for behavior reconstruction. International Symposium on Dental Morphology and 1st Congress of the International Association for Paleodontology, Zagreb, Croatia. Bulletin of the International Association for Paleodontology, 8, 1. 2014.
5. Weber GW, Fornai C, Gopher A, Barkai R, **Sarig R**, Hershkovitz I. The Qesem Cave mandibular premolars and molar from a morphometric perspective. The American Association of Physical Anthropologists (AAPA), Canada, American Journal of Physical Anthropology Vol. 153, pp. 268-269, 2014.
6. Fornai, C., Benazzi, S., Gopher, A., Barkai, R., **Sarig, R.**, Hershkovitz, I., & Weber, G. W. Comparative morphometric analyses of a lower deciduous second molar from Qesem Cave Middle Pleistocene site (Israel). AAPA Meeting St. Louis, MO, In American Journal of Physical Anthropology Vol. 156, pp. 135-135, 2015.
7. H May, K Kupczick, E Schultz-Kornas, **R Sarig**. Subsistence transition and mandible morphology: a case test from the advent of agriculture in the Levant. 5th annual meeting of the European Society for the study of Human Evolution, London, UK. p. 155, 2015.

8. **R Sarig**, A Gopher, R Barkai, GW Weber, C Fornai, K Kupczik, E Schulz-Kornas, H May, I Hershkovitz. Interproximal wear patterns of the Middle Pleistocene (420-200 kyr). 5th annual meeting of the European Society for the study of Human Evolution, London, UK. p. 195, 2015.
9. E Schulz-Kornas, **R Sarig**, H May, K Kupczik. Tooth wear analysis in molar samples from Natufian to modern human populations in the southern Levant using the 3D surface texture approach. 5th annual meeting of the European Society for the study of Human Evolution, London, UK. p. 201, 2015.