

Curriculum vitae Olga Rickards

Born in Rome, July 20th 1952.

ACADEMIC TITLES

- She achieved her Ph.D. in Natural Sciences at Sapienza – Università di Roma (1978 in Anthropology).
- She achieved her Ph.D. in Biological Sciences at Sapienza – Università di Roma (1981 in Molecular Anthropology).
- She became in 1984 Assistant Professor of Molecular Anthropology at Tor Vergata – Università di Roma.
- She became in 2000 Full (Ordinarius) Professor of Molecular Anthropology at Tor Vergata – Università di Roma.

At Tor Vergata University she has served as:

- Head of the “Departmental Centre of Molecular Anthropology for ancient DNA studies” (since 1996; Department of Biology).
- President of the First and Second level Degree Courses in Biology (2005-2011).
- Coordinator of the Macroarea of MFN Sciences (since 2013).
- Vice Director of the Department of Biology (since 2012).
- Member of the PhD Committee in Evolutionary Biology and Ecology (since 1993).
- Member of the Senato Accademico Integrato (1993-1998).

Long/short term research appointments

- NATO fellow, Department of Genetics and Molecular Biology, University of Hawaii (1998-1999; 1991-1992; 1994);
- Research Specialist: Department of Human Biology/Physical Anthropology, University of Bremen FRG (1985); Department of Genetics, General Biology, University of Naples (1986); Department of Animal Biology, University of Barcelona (1990); Human Genetics Laboratories, Roche Molecular System, Alameda California (1993), Department of Animal Biology, University of Bilbao (1995); Department of Animal Biology, Complutense University of Madrid (1996, 1997 ERASMUS project).

Editor of the International Journal “Annals of Human Biology” (Publisher: Informa Healthcare, London) (since 2004).

Officer of the Italian Anthropological Association (since 2007-2014).

Olga Rickards was one of the first scientist in Italy to apply Molecular Anthropology to the reconstruction of the origin and history of human populations, traditionally studied through palaeontology and archaeology. Since the early seventies, her research group has investigated human genetic variability first at protein and afterwards at DNA level. This data was used to explore the evolutionary history of human populations living in various geographical areas, providing a quantitative and temporal framework that was unavailable from other types of evidence. Since 1990’s her research has focused on the characterization of ancient genetic material from prehistoric peoples of Italy, North Africa and South America and the comparison with sequence data from modern populations.

Scientific director of the Italian group of the International Columbus Identification DNA Team (coordinator Prof. J. Lorente, University of Granada).

Member of GRANDI (GRoupement d'ANthropologie DIDactique) EAA.

Reviewer of the National Science Foundation grants.

Invited speaker in international and national meetings.

Member of several international and national scientific associations.

Member of the Editorial Board of the Revista Española de Antropología Biológica.

Member of the Scientific Committee of the on-line journal Antropo.

Reviewer for international and national scientific journals.

Curator of national exhibitions on human evolution (“Senza Adamo Senza Eva” – 1998 Roma, 2001 Martina Franca, Taranto; “Dimenticando Adamo” – 2002 Piancastagnaio, Siena, 2003 Viterbo, 2005 Sant’ Angelo Muxaro, Agrigento; “Lucy in the sky with diamonds: alle origini dell’uomo” – 2007 Modena; Evoluzioni. Le scienze tra natura e numeri – 2007 Monte Porzio Catone, Roma).

Scientific organizer and director of the international workshop “Ancient DNA analysis: a new servant to Archaeoanthropology and Forensic Medicine” Bioroma 2000, Università degli Studi di Roma “Tor Vergata”, 30-31 marzo 2000.

She is author of a blog, reporting news on human evolution, of nova100 ilsole24ore (<http://rickardsbiondi.nova100.ilsole24ore.com/>).

Research Interests: Human evolution, mtDNA and nuclear polymorphisms, ancient DNA, stable isotope analysis for reconstructing genetic history, palaeodiet and migrations of ancient populations.

RESEARCH GRANT

PRIN MIUR (Italian Ministry for the Universities) 2010-11 (3 years)

prot.2010EL8TXP National Scientific Coordinator: Olga RICKARDS (838.429 euro)

Biological and cultural heritage of the central-southern Italian population trough 30 thousand Years EPIC (Eredità della Popolazione dell'Italia Centro-meridionale)

prot. 2010EL8TXP_001 (Principal investigator local unit 1: Olga RICKARDS) (264.585 euro)

PRIN MIUR (Italian Ministry for the Universities) 2008 (2 years)

prot. 2008B4J2HS National Scientific Coordinator: Olga RICKARDS (156,098 euro)

Origin and diffusion of farming in central-southern Italy: a multidisciplinary approach.

prot. 2008B4J2HS_001 (Principal investigator local unit 1: Olga RICKARDS) (126,429 euro)

Origin and diffusion of farming in central-southern Italy: a molecular approach.

PRIN (Italian Ministry for the Universities) 2005 (2 years)

prot. 2005057557_001 National Scientific Coordinator and Principal investigator local unit: Olga RICKARDS (128,600 euro)

Dietary variability and genetic origins of ancient human populations: a combined ancient biomolecular approach.

PRIN (Italian Ministry for the Universities) 2003 (2 years)

Nomads and sedentary people. Climatic variations, population dynamics and cultural tracks in Africa and Asia during Olocene.

National Scientific Coordinator: Mario LIVERANI

prot. 2003100945_002 (Principal investigator local unit 2: Olga RICKARDS) (88,200 euro)

Nomads and sedentary people. Reconstruction of the genetic history of ancient and extant populations from Libyan Sahara.

Strategic programme "Biological Archive" CNR (National Research Council) 1994 (1 year)

prot. 94.04629.ST74 (Scientific leader: Olga RICKARDS) (50,000 Euro)

Sub-project 4.1.3 *A molecular approach to the study of ancient populations of Sicily.*

Special Project "Safeguard of the Cultural Heritage" CNR (National Research Council) 1996 (5 years)

prot.96.01168.PF36-97.00689.PF36 (Scientific leader: Olga RICKARDS) (500,000 euro)

Molecular approach to the study of the ancient Italian populations: reconstruction of the peopling of southern Italy and Sicily in the frame of the Mediterranean Basin.

Scientific Leader of the European Economic Community programme "Human Capital and Mobility" 1992 (2 years)

Proposal ERB4001GT921357 (Scientific leader: Olga RICKARDS) (98,951 euro)

Genetic diversity of the mitochondrial genoma in some native populations of Ecuador.

Scientist in charge on fellow's work during the intra-European fellowship (Marie Curie Action) 2004 (3 years)

Contract. MEIF-CT-2004-010003 (17,661.62)

Recovery of ancient DNA from archaeological residues

10-year track-record

The research activity of Olga Rickards is characterized by a methodology and perspective involving both a strong engagement as a field anthropologist, with a personal and direct participation in sample collections, and a remarkable interdisciplinary approach, dealing with archaeology, geology, ecology, physical and molecular anthropology, botany, zoology and biochemistry, to the reconstruction of human populations history and evolution as evinced in her publications (more than 150).

The main research expeditions Olga Rickards participated to were carried out:

1. at Tahala and El-Awinat villages (Libyan Sahara) in 2004, as part of the Italian-Libyan Archaeological Mission in the Acacus and Messak of the Sapienza University of Rome and the Department of Antiquities, Tripoli, directed by Prof. Savino di Lernia and the late Ebrahim Azzebi, and aimed to clarify the genetic composition and origin of the extant Libyan Tuaregs and their possible relationships with the Garamantes people;
2. and at Olduvai Gorge, near the Great Rift Valley in northern Tanzania in 2011, as coordinator and

supervisor of the field-workshop organized by the University of Perugia in the frame of the first edition of the Palaeoanthropology school held in Perugia on 14-18 February 2011.

Olga Rickards was the scientific organizer of the 51st International Symposium of the Society for the Study of Human Biology, held at Monteporzio Catone, Roma, in 2009 on the theme of 'Human Dispersals'. The aim of the Symposium was to reconstruct human colonization and migrations out of Africa applying traditional and new approaches such as archaeology, genetics, molecular anthropology, the recovery and analyses of ancient biomolecules, food production and human diet.

In 2009 she was awarded the Accademia Nazionale dei Lincei International Prize "Fabio Frassetto" for anthropology for her scientific research in the field of molecular anthropology with special mention to ancient DNA studies.

She was invited to present a main lecture to the peer-reviewed and internationally established conference *Biological evolution: facts and theories. A critical appraisal 150 years after "The origin of species"* Roma, 3-7 March 2009, Gregorian University, Rome, which was published in the Proceedings of the Conference: RICKARDS O, BIONDI G (2011). The origin of man: molecular approach. In: *Biological evolution: facts and theories. A critical appraisal 150 years after "The origin of species"* (G. Auletta, M. Leclerc, R.A. Martinez, eds.). Roma, 3-7 March 2009, p. 225-241, ROME: Gregorian and Biblical Press, ISBN: 978-88-7839-180-2).

Curator of national exhibitions on human evolution, and of international workshops and meetings on ancient DNA.

Articoli selezionati/Selected Articles

- RICKARDS O, BIONDI G, DE STEFANO GF, VECCHI F, WALTER H (1992). GENETIC-STRUCTURE OF THE POPULATION OF SICILY. AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY, vol. 87, p. 395-406.
- TITUS EAB, KLITZ W, RICKARDS O, DESTEFANO GF, ERLICH HA (1993). HLA CLASS-II EVOLUTION IN THE CAYAPA INDIANS OF ECUADOR. HUMAN IMMUNOLOGY, vol. 37, p. 16.
- LUM JK, RICKARDS O, CHING C, CANN RL (1994). POLYNESIAN MITOCHONDRIAL DNAS REVEAL 3 DEEP MATERNAL LINEAGE CLUSTERS. HUMAN BIOLOGY, vol. 66, p. 567-590.
- TITUS TRACHTENBERG EA, RICKARDS O, DESTEFANO GF, ERLICH HA (1994). ANALYSIS OF HLA CLASS-II HAPLOTYPES IN THE CAYAPA INDIANS OF ECUADOR - A NOVEL DRB-I ALLELE REVEALS EVIDENCE FOR CONVERGENT EVOLUTION AND BALANCING SELECTION AT POSITION-86. AMERICAN JOURNAL OF HUMAN GENETICS, vol. 55, p. 160-167.
- TRACHTENBERG EA, ERLICH HA, RICKARDS O, DESTEFANO GF, KLITZ W (1995). HLA CLASS-II LINKAGE DISEQUILIBRIUM AND HAPLOTYPE EVOLUTION IN THE CAYAPA INDIANS OF ECUADOR. AMERICAN JOURNAL OF HUMAN GENETICS, vol. 57, p. 415-424.
- TARTAGLIA M, SCACCHI R, CORBO RM, POMPEI F, RICKARDS O, CIMINELLI BM, SANGATRAMANI T, VYAS M, DASH S, MODIANO G (1995). Genetic heterogeneity among the Hindus and their relationships with the other 'Caucasoid' populations: new data on Punjab-Haryana and Rajasthan Indian States. AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY, vol. 98, p. 257-273.
- RICKARDS O (1995). Analysis of the region V mitochondrial marker in two African-American communities of Ecuador and in their parental populations. HUMAN EVOLUTION, vol. 10, p. 5-16.
- BIONDI G, RICKARDS O, MARTINEZ LABARGA C, TARABORELLI T, CIMINELLI B, GRUPPIONI G (1996). Biodemography and genetics of the Berba of Benin. AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY, vol. 99, p. 519-535.
- PEPE G, VANEGAS OC, GIUSTI B, BRUNELLI T, MARCUCCI R, ATTANASIO M, RICKARDS O, DE STEFANO GF, PRISCO D, GENSINI GF, ABBATE R (1998). Heterogeneity in world distribution of the thermolabile C677T mutation in 5,10-methylenetetrahydrofolate reductase. AMERICAN JOURNAL OF HUMAN GENETICS, vol. 63, p. 917-920.
- RICKARDS O, MARTINEZ-LABARGA C, LUM JK, DE STEFANO GF, CANN RL (1999). mtDNA history of the Cayapa Amerinds of Ecuador: Detection of additional founding lineages for the native American populations. AMERICAN JOURNAL OF HUMAN GENETICS, vol. 65, p. 519-530.
- PEPE G, VANEGAS OC, RICKARDS O, GIUSTI B, COMEGLIO P, BRUNELLI T, MARCUCCI R, PRISCO D, GENSINI GF, ABBATE R (1999). World distribution of the TS33C/844INS68 CBS in cis double mutation: a reliable anthropological marker. HUMAN GENETICS, vol. 104, p. 126-129.
- MARTINEZ-LABARGA C, RICKARDS O, SCACCHI R, CORBO RM, BIONDI G, PENA JA, DE VIEIRA CV, GUEVARA AEB, SANTURINO MSM, DE STEFANO GF (1999). Genetic population structure of two African-Ecuadorian communities of Esmeraldas. AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY, vol. 109, p. 159-174.
- SCOZZARI R, CRUCIANI F, SANTOLAMAZZA P, MALASPINA P, TORRONI A, SELBITTO D, ARREDI B, DESTRO-BISOL G, DE STEFANO G, RICKARDS O, MARTINEZ-LABARGA C, MODIANO D, BIONDI G, MORAL P, OLCKERS A, WALLACE DC, NOVELLETTO A (1999). Combined use of biallelic and microsatellite Y-chromosome polymorphisms to infer affinities among African populations. AMERICAN JOURNAL OF HUMAN GENETICS, vol. 65, p. 829-846.
- TARAZONA-SANTOS E, CARVALHO-SILVA DR, PETTENER D, LUISELLI D, DE STEFANO GF, LABARGA CM, RICKARDS O, TYLER-SMITH C, PENA SDJ, SANTOS FR (2001). Genetic differentiation in South Amerindians is related to environmental and cultural diversity: Evidence from the Y chromosome. AMERICAN JOURNAL OF HUMAN GENETICS, vol. 68, p. 1485-1496.
- RICKARDS O, MARTINEZ-LABARGA C, FAVARO M, FREZZA D, MALLEGNI F (2001). DNA analyses of the remains of the Prince Branciforte Barresi family. INTERNATIONAL JOURNAL OF LEGAL MEDICINE, vol. 114, p. 141-146.
- TORRONI A, BANDELT HJ, MACAULAY V, RICHARDS M, CRUCIANI F, RENGO C, MARTINEZ-CABRERA V, VILLEMS R, KIVISILD T, METSPALU E, PARIK JR, TOLK HV, TAMBETS K, FORSTER P, KARGER B, FRANCALACCI P, RUDAN P, JANICJEVIC B, RICKARDS O, SAVONTAUS ML, HUOPONEN K, LAITINEN V, KOIVUMAKI S, SYKES B, HICKEY E, NOVELLETTO A, MORAL P, SELBITTO D, COPPA A, AL-ZAHERI N, SANTACHIARA-

BENERECETTI AS, SEMINO O, SCOZZARI R (2001). A signal, from human mtDNA, of postglacial recolonization in Europe. *AMERICAN JOURNAL OF HUMAN GENETICS*, vol. 69, p. 844-852.

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BABALINI C., MARTINEZ-LABARGA C., TOLK H.V., KIVISILD T., GIAMPAOLO R., TARSÌ T., CONTINI I., BARAC L., JANICIJEVIC B., MARTINOVIC KLARIC I., PERICIC M., SUJOLDZIC A., VILLEMS R., BIONDI G., RUDAN P., RICKARDS O. (2005). The genetic history of the Croatian linguistic minority of Molise (southern Italy): a maternal view. *EUROPEAN JOURNAL OF HUMAN GENETICS*, vol. 13, pp. 902-912.

LUCIANI S., FORNACIARI G., RICKARDS O., MARTINEZ-LABARGA C., ROLLO F. (2006) Molecular characterization of a pre-Columbian mummy and in situ coprolite. *AMERICAN JOURNAL PHYSICAL ANTHROPOLOGY*, vol. 129, pp.620-9.

KEMP B.M., MALHI R.S., MCDONOUGH J., BOLNICK D.A., ESHLEMAN J.A., RICKARDS O., MARTINEZ-LABARGA C., JOHNSON J.R., LORENZ J.G., DIXON E.J., FIFIELD T.E., HEATON T.H., WORL R., SMITH D.G. (2007) Genetic analysis of early holocene skeletal remains from Alaska and its implications for the settlement of the Americas. *AMERICAN JOURNAL PHYSICAL ANTHROPOLOGY*, vol. 132, pp.605-21.

TAMM E., KIVISILD T., REIDLA M., METSPALU M., SMITH D.G., MULLIGAN C.J., BRAVI C.M., RICKARDS O., MARTINEZ-LABARGA C., KHUSNUTDINOVA E.K., FEDOROVA S.A., GOLUBENKO M.V., STEPANOV V.A., GUBINA M.A., ZHADANOV S.I., OSSIPOVA L.P., DAMBA L., VOEVODA M.I., DIPIERRI J.E., VILLEMS R., MALHI R.S. (2007) Beringian standstill and spread of Native American founders. *PLOS One*.2(9):e829.

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OTTONI, C., PRIMATIVO, G., HOOSHIAR KASHANI, B., ACHILLI, A., MARTÍNEZ-LABARGA, C., BIONDI, G., TORRONI, A., RICKARDS O. (2010) Mitochondrial Haplogroup H1 in North Africa: An Early Holocene Arrival from Iberia. *PLOS ONE* 5(10): e13378. doi:10.1371/journal.pone.0013378.

OTTONI, C., LARMUSEAU, M.H.D., VANDERHEYDEN, M., MARTINEZ-LABARGA, C., PRIMATIVO, G., BIONDI, G., DECORTE, R., RICKARDS, O. (2011) Deep Into the Roots of the Libyan Tuareg: A Genetic Survey of Their Paternal Heritage. *AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY*, vol. 145(1), p. 118-24.

GASBARRINI G, RICKARDS O, MARTÍNEZ-LABARGA C, PACCIANI E, CHILLERI F, LATERZA L, MARANGI G, SCALDAFERRI F, GASBARRINI A (2012). The origin of celiac disease: How old are predisposing haplotypes? . *WORLD JOURNAL OF GASTROENTEROLOGY*, vol. 18, p. 5300-53004.

MARTÍNEZ-GONZÁLEZ LJ, MARTÍNEZ-ESPÍN E, ALVAREZ JC, ALBARDANER F, RICKARDS O, MARTÍNEZ-LABARGA C, CALAFELL F, LORENTE JA (2012). Surname and Y chromosome in Southern Europe: a case study with Colom/Colombo. *EUROPEAN JOURNAL OF HUMAN GENETICS*, vol. 20, p. 2011-2016.

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-Monografie/Monographs

G. BIONDI, O. RICKARDS (2011). *L'errore della razza. Avventure e sventure di un mito pericoloso*. ROMA:Carocci Editore, ISBN: 978-88-430-6092-4.

G. BIONDI, O. RICKARDS (2009). *Umani da sei milioni di anni*. ROMA:Carocci Editore, ISBN: 978-88-430-5113-7.

G. BIONDI, F. GHIONE, O. RICKARDS, V. SBORDONI (2008). *Evoluzioni. Le Scienze tra Natura e Numeri*. Antropologia, Biodiversità, Matematica. Roma: OMgrafica, ISBN: 978-88-95688-02-2.

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