

Curriculum vitae - I. Barrai

Italo Enrico Barrai, born 13th May 1931 - Sarzana (La Spezia)

- 1954 Degree in Natural History (Major in Zoology), University of Genoa supervisor Prof. Giuseppe Scortecci (1898-1973).
- 1954-1959 Teacher of Natural History in senior High Schools, Savona and Genoa
- 1959-1961 Post-Doctoral Fellow of the National Committee for Nuclear Energy, at the Institute of Genetics of the University of Pavia, in the research group of Prof. L.L. Cavalli Sforza.
- 1961-1962 NIH Post-Doctoral Fellow at the Department of Medical Genetics of the University of Wisconsin, in the research group of Prof. Newton E. Morton.
- 1962-1968 Researcher, Chief Researcher, at the Pavia Section of the International Institute of Genetics, IIGB.
- 1968-1974 Chief, Human Genetics Unit, WHO, Geneva
- 1974-1975 Teacher of Genetics, Faculty of Sciences, University of Ferrara
- 1975-2002 Full Professorship of Genetics, Faculty of Sciences, University of Ferrara
- 1980-1988 Member, National toxicological Committee, Health Ministry.
- 1982-2002 Coordinator of the PhD program in Genetics, Universities of Bologna, Ferrara, Padova, Parma and Pisa
- 1983-1986 On paid leave at the Interdisciplinary Center of the National Academy of the Lincei, Rome.
- 1986-1989 Dean of Biology, University of Ferrara
- 1992-1995 Dean of the Faculty of Sciences, University of Ferrara
- 1995-1997 President, Italian Genetic Society
- 1997-1998 President, Ferrara Academy of Sciences
- 2004-life Emeritus Professor in the Faculty of Sciences, University of Ferrara

Research lines

1. Genetic structure of human populations
2. Control of cooley's Anemia in the Province of Ferrara, with Prof. C. Vullo.
3. Development of programs for the monitoring of environmental mutagenicity, with Prof. R. Barale of Pisa.
4. Development of methods for the comparison and the analysis of DNA sequences
5. Development of statistical methods for the identification of signals on the DNA.

LITERATURE

About 250 publications in English, Italian, German, and French. A few publications in Spanish and Portuguese.

Seven textbooks on Genetics, Population genetics, Quantitative genetics, and elementary and advanced Statistics.

Most recent literature at:

<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=search&term=barrai>

DISTINCTIONS

- Honorary Member, Sociedad Peruana de Génética Médica
- Honorary Member, Sociedad Venezolana de Génética
- Member, Accademy of Sciences of Ferrara
- Interdisciplinary Center of the Accademia dei Lincei, 1983-1986
- Member, New York Academy of Sciences

LANGUAGES

- Italiano
- English
- Français
- Castellano (leje y habla)
- Deutsch (lesen u. sprachen)
- Portuguese (solo fala)

International Bibliography

1961

1. Barrai, I., Fraccaro, M., Lindsten, J., Zei, G. (1961)
Birth weight and related variables for offspring of mothers aged 42 or more years.
Ann. Hum. Genet. Lond., 25: 189-198

1962

2. Barrai, I., Cavalli-Sforza, L.L., Moroni, A. (1962)
Frequencies of pedigrees of consanguineous marriages and mating structure of the population.
Ann. Hum. Genet. Lond. 25: 347-376

1964

3. Barrai, I., Cavalli-Sforza, L.L., Mainardi, M. (1964)
Testing a model of dominant inheritance for metric traits in man.
Heredity 19: 651-668
4. Cavalli-Sforza, L.L., Barrai, I., Edwards, A.W.F. (1964)
Analysis of human evolution under random genetic drift.
Cold Spring Harbor Symp. Quant. Biol. XXIX: 9-20

1965

5. Barrai, I., Cann, H.M. (1965)
Segregation analysis of juvenile diabetes mellitus
J. Med. Genet. 2: 8-11
6. Barrai, I., Cavalli-Sforza, L.L., Moroni, A. (1965)
Record linkage from parish books.
In "Mathematics and computer science in biology and medicine", Med. Res. Council, Lond., p. 51-60
7. Klinger, H.P., Lindsten, J., Fraccaro, M., Barrai, I., Dolinar, Z. (1965)
DNA content and area of sex chromatin in subjects with structural and numerical aberrations of the X chromosome.
Cytogenetics 4: 96-116
8. Barrai I., Mi M.P., Morton N.E., Yasuda N. (1965)
Estimation of prevalence under incomplete selection.
Am. J. Hum. Genet. 17: 221-236
9. Dewey, W.J., Barrai I., Morton N.E., Mi M.P. (1965)
Recessive genes in severe mental defect.
Am. J. Hum. Genet. 17: 237-256

1966

10. Cavalli-Sforza L.L., Kimura M., Barrai I. (1966)

The probability of consanguineous marriages.
Genetics, 54: 37-60

1968

11. Barrai I., Moroni A., Cavalli-Sforza L.L. (1968)
Further studies on record linkage from parish books.
Record Linkage in Medicine, E.D. Acheson Editor, Oxford,
pp.270-280
12. Barrai I., Cann H.M., Cavalli-Sforza L.L., De Nicola P.
(1968)
The effect of parental ages on rates of mutation for
hemophilia and evidence for differing mutation rates for
hemophilia A and B.
Am. J. Hum. Genet. 20: 175-196

1969

13. Barrai I., Cavalli-Sforza L.L., Moroni A. (1969)
The prediction of consanguineous marriage.
Jap. J. Genet. 44: 230-233
14. WHO TRS n. 416 (1969)
Genetic Counselling. Third report of the WHO Expert
Committee on Human Genetics. I. Barrai, Secretary.
15. Barrai I., Simbeye A.G.A. (1969)
Location of antigenic specificity in human serum
lipoproteins.
18th. Colloquium Prot. Biol. Fluids, pp. 323-327
16. Riva S., Barrai I., Cavalli-Sforza L.L., Falaschi A. (1969)
Dependence of buoyant density of single stranded DNA on
base composition.
J. Mol. Biol. 45: 367-374

1970

17. Barrai, I (1970)
Human Genetics and Public Health.
WHO Chronicle, 24: 263-266
18. WHO TRS n. 438 (1970)
Genetic factors in congenital malformations. Report of a
WHO Scientific Group. I. Barrai, Secretary.
2.179
19. Barrai I. (1970)
G,n,tique humaine et sant, publique.
Cronique OMS, 24: 241-247
20. Barrai I. (1970)
Menschliche Genetik und Oeffentliche Gesundheit.
Umschau Jahrbuch, Frankfurt a.M., S. 57-68

1971

21. Barrai I. (1971)
Subdivision and inbreeding.
Am. J. Hum. Genet. 23: 95-96
9.262 9.262
22. Barrai I., Mandel S.P.A. (1971)
Equilibrium under inbreeding in balanced polymorphisms.
Bull. Wld. Hlth. Org. 45: 201-208
1.535 1.535
23. Freire-Maia N., Krieger H., Barrai I. (1971)
The capacity of estimates of B/A ratio to discriminate genetic loads.
Cahiers I.N.E.D., Génétique et populations, n. 60: 83-90
24. WHO TRS n. 466 (1971)
Methodology for family studies of genetic factors. Report of a WHO Scientific Group. I. Barrai, Secretary.
2.179
25. Barrai I., Nei M. (1971)
Subdivision and inbreeding.
Am. J. Hum. Genet. 23: 540
9.262 9.262
26. Barrai I. (1971)
Indicators of genetic distance.
In: Genetic Distance, J.F. Crow and C. Denniston Editors,
pp. 213-217
27. Barrai I. (1971)
The Human Race.
World Health, October 1971, pp. 3-9

1972

28. Mandel S.P.H. and Barrai I. (1972)
Inbreeding and the fundamental theorem of natural selection.
Heredity 29: 103-107
29. Barrai I. (1972)
Variation of metric traits under subdivision and inbreeding. Heredity, 28: 259-261
1.815
30. WHO TRS n. 497 (1972)
Genetic disorders: prevention, treatment, and rehabilitation. Report of a WHO Scientific Group. I. Barrai, Secretary.
31. WHO TRS n. 509 (1972)
Treatment of hemoglobinopathies and allied disorders.
Report of a WHO Scientific Group. I. Barrai, Secretary.
32. WHO TRS n. 504 (1972)
Inherited blood clotting disorders. Report of a WHO

Scientific Group. I. Barrai. Secretary.

33. WHO Report on Schistosomicidal drugs. (1972)
I. Barrai, Member of the Secretariat.
Bol. Oficina Sanitaria Panamericana 6: 82-89

1973

34. Bechelli L.M., Barrai I., Uemura K., Guinto L., Gji M.M. (1973)
Correlation of leprosy rates between villages and geographic distances.
Bull. Wld Hlth Org. 48: 257-260
35. Barrai I., Narishkin P., Uemura K. (1973)
Genetic distances in simulated populations.
Pop. Genet. Monographs n. 3, Univ. Hawaii Press, pp. 164-165
36. Barrai I. (1973)
Sex-ratio and the detection of mutagens.
WHO Document HG 73.3, pp. 1-6
37. WHO TRS n. 524 (1973)
Pharmacogenetics. Report of a WHO Scientific Group.
I. Barrai, Secretary.
38. Barrai I., Clarke Fraser F.C., Nance W., Bickel H., Carter C.O., Bochkov N., Book J., Fujiki N., Halbrecht I., Lamy R.F., Rossi E. (1973)
World Health Organization and Genetic Disorders.
Nature 246: 440-441
27.074 4.923

1974

39. Barrai I. (1974)
Genetica de Populações do polimorfismo hemoglobinico.
In: Genetica de populações humanas, by N.E. Freire Maia, São Paulo, Editoria 'Hucitec', pp. 201-208

1975

40. Barrai I. (1975)
Problems in the estimation of mutation rates and in the detection of induced mutations in man.
Mutation Research, 33: 37-44

1976

41. Barrai I. (1976)
Variation and Number.
Proc. Int. Conf. Biology and the Future of Man, Univ. of Paris Editor, p. 305
42. Barrai I. (1976)
L'étude des Isolats: Résultats et Interprétation.
In l'étude des Isolats, A. Jacquard Editeur, INED, Paris, pp. 265-275

1977

43. Barrai I. (1977)
Spontaneous mutation rates in man.
Mutation Research 46: 199
44. Barrai I. (1977)
Spontaneous Mutation in Man.
Abhandlungen Akad. Wiss. DDR 9: 139-152
45. Zanardi P., Dell'Acqua G., Menini C., Barrai I. (1977)
Population Genetics in the Province of Ferrara: I. Genetic distances and geographic distances.
Am. J. Hum. Genet. 29: 169-177
46. Cucchi P., Vullo C., Barrai I. (1977)
Population Genetics in the Province of Ferrara: II.
Survival of children with Cooley's Anemia.
Am. J. Hum. Genet. 29: 178-183
9.262 6.175
47. Papi C., Prampolini B., Vullo C., Barrai I. (1977)
Segregation analysis of thalassemia in Ferrara.
Am. J. Hum. Genet. 29: 627-634
9.262 4.631

1978

48. Barrai I. (1978)
Soviet Genetics.
Nature 271: 8
49. Aguzzi S., Vullo C., Barrai I. (1978)
Reproductive compensation in families segregating for Cooley's anemia in Ferrara.
Ann. Hum. Genet., Lond., 42: 153-160
50. Barrai I., Mattiuz P.L. (1978)
HLA polymorphism and disease associations. In: Mutations, Biology and Society, D.N. Walker, N. Kretchmer and H.L. Barrett Editors, Masson USA, New York, N.Y., pp. 123-135.

1979

51. Barrai I., Cann H.M., Cavalli-Sforza L.L., De Nicola P. (1979)
Segregation analysis of hemophilia A and B.
Am. J. Hum. Genet. 31: 226-227

1980

52. Toti A., Piffanelli A., Pavanelli T., Buriani C., Nenci I., Arslan Pagnini C. Zanardi P., Pecorari S., Rossi R., Barrai I. (1980)
Possible indication of breast cancer risk through discriminant functions.
Cancer 46: 1280-1285

53. Barrai I., Vullo C. (1980)
Assessment of prospective genetic counselling in the Ferrara area.
Am. J. Med. Genet. 6: 195-204
54. Barrai I., Vullo C. (1980)
Genetic counselling in beta thalassemia in Ferrara.
J. Génétique Humaine 28: 97-104
55. Barrai I., Vullo C. (1980)
Screening for beta thalassemia heterozygotes.
Lancet, Dec. 6, p. 1257

1981

56. Beretta M., Ravani Sacchi A., Salsini G., Barrai I. (1981)
Red cell isozymes in the population of the Po Delta.
J. Hum. Evolution 10: 517-521

1982

57. Barrai I. (1982)
Comment in 'Bioassay of kinship' by N.E. Morton et al.
Current Anthropology 23: 162
58. Barrai I. (1982)
Comment in 'Distribution of ABO blood groups' by P.P. Majumder and J. Roy.
Current Anthropology 23: 560

1983

59. Beretta, M., Schiliro', G., Russo, Antonio,
Barbujani, G., Mazzetti, P., Russo, G., Barrai, I. (1983)
A new rare variant of the Glyoxalase I system of the red cell: GLO-Sicily.
Am. J. Hum. Genet. 35: 1042-1047
60. Barrai, I. Barbujani, G., Beretta, M., Vullo, C. (1983)
Heterozygosity and geographic distance in a limited area.
J. Hum. Evolution, 12: 403-408
61. Barrai, I. (1983)
A Model for Differentiation
J. Theor. Biol., 105: 379-389

1984

62. Barrai, I., Rosito, A., Cappellozza, G., Cristofori, G.,
Vullo, C., Scapoli, C., Barbujani, G. (1984)
Beta thalassemia in the Po delta: selection, geography, and population structure.
Am. J. Hum. Genet. 36: 1121-1134

1985

63. Pinto Cisternas J, Pineda L, and I. Barrai (1985)
Estimation of Inbreeding by isonymy in iberoamerican

populations: an extension of the method of Crow and Mange.
Am. J. Hum. Genet. 37: 373-385

64. Barrai, I., H.M. Cann, L.L. Cavalli-Sforza, G. Barbujani and P. De Nicola (1985)
Segregation analysis of hemophilia A and B.
Am. J. Hum. Genet. 37: 680-692

1986

65. Barrai, I. (1986)
Dermatoglyphics in Western Pygmies. In: African Pygmies, L.L. Cavalli-Sforza Editor, Academic Press, Inc., pp. 307-309
66. Barbujani, G., Rolo, M., Barrai, I., Pinto-Cisternas, J. (1986)
Torus Palatinus: a segregation analysis.
Human Heredity 36: 317-325
1.302 0.326
67. Beretta, M., Mazzetti, P., Frosina, G., Schiliro', G., Russo, Antonio, Russo, G., Barrai, I. (1986)
Population structure of Eastern Sicily
Human Heredity, 36: 379-387
1.302 0.326

1987

68. Barrai, I., Schiliro', G., Beretta, M., Russo Antonio, Russo-Mancuso, G. (1987)
Population structure of Sicily: Beta-thalassemia and HbS.
Human Genetics, 75: 1-3
2.551 0.510
69. Canella, R. Barbujani, G., Cucchi, P., Siniscalco, M., Vullo, C., and Barrai, I. (1987)
Biological performance in á-thal heterozygotes and normals: results of a longitudinal comparison in a former malarial environment.
Ann. Hum. Genet. Lond., 51: 337-343
2.281 0.760
70. Barrai, I., Barbujani, G., Beretta, M., Formica, G., Maestri, I., Pinto Cisternas, J., Russo, A. (1987)
Surnames in Ferrara: Distribution, Isonymy and Levels of Inbreeding.
Annals of Human Biology, 14: 415-423
0.678 0.097
71. Barrai, I. (1987)
The indication of genetic and environmental components in behaviour.
Human Evolution, 2: 419-428
72. Barrai, I (1987)
Quest for order in DNA sequences
Rev. Latinoam. Genet. 1: 3-9

1988

73. Pineda, L., Villalobos, H., and I. Barrai (1988)
The origin of the HbS gene in the Island of Toas, Venezuela
Intl. J. Anthropology, 3:1-8
74. Mazzetti P, Beretta M, Mamolini E, Barrai I, Schiliro' G,
Testa, R, and Azia, N (1988)
Distribution of enzyme polymorphisms in six Sicilian
communes
Gene geography 2: 43-50
75. Volinia S, R Gambari, F Bernardi and I Barrai (1988)
Co-localization of rare oligonucleotides and regulatory
elements in mammalian upstream genic regions.
J. Mol. Biol. 203: 385-390
76. Barrai, I. (1988)
Fit of isolation by distance models: Curve fitting.
Human Heredity 38: 381-382

1989

77. Dell'Acqua G., M.T. Tasini, E. Guidi, G. Formica, R. Pansini,
G. Rausa and I. Barrai (1989)
Family resemblance in blood pressure measurements.
Annals of Human Biology, 16: 99-109
78. Volinia S., Gambari R., Bernardi F., and Barrai I (1989)
The frequency of oligonucleotides in mammalian genic
regions.
CABIOS, 5: 33-40
79. Barrai I., Formica G., Barale R., Beretta M. (1989)
Isonimy and migration distance.
Ann. Hum. Genet. Lond. 53: 249-262
80. Beretta M., P. Mazzetti, E. Mamolini, R. Gavina, R. Barale,
C. Vullo, A. Ravani, A. Franze', T. Sapigni, E. Soracco,
D. Davi, N. Ricci, N. Cappello, S. Rendine, A. Piazza and
I. Barrai (1989)
Genetic structure of the human population in the Po Delta.
Am. J. Hum. Genet. 45: 49-62

1990

81. Barrai I., Formica G., Barale R., Canella R., Scapoli C.,
Beretta M. (1990)
Isonimy in emigrants from Ferrara in 1981-1988
Annals of Human Biology 17: 7-18
82. Pinto-Cisternas J., Zimmer E. and Barrai I. (1990)
Secular variation of Lasker's coefficient of relationship
in a Venezuelan town in two different periods.
Annals of Human Biology 17: 305-310
83. Barrai I., Scapoli C., Barale R., Volinia S. (1990)
Oligonucleotide correlations between infector and host
genomes hint at evolutionary relationships.
Nucleic Acid Research, 18: 3021-3025
4.235 2.118

84. Barale R., Marazzini A., Betti C., Vangelisti V., Loprieno N., and Barrai I. (1990)
Genotoxicity of two metabolites of benzene: phenol and hydroquinone show strong synergistic effects in vivo
Mut. Res. Letters, 244: 15-20
85. Barbieri, R., Giacomini, P., Volinia, S., Nastruzzi, C., Mileo, A.M., Ferrini, U., Soria, M., Barrai, I., Natali, P.G. and R. Gambari (1990)
Human HLA-DR α gene: a rare oligonucleotide (GTATA) identifies an upstream sequence required for nuclear protein binding.
FEBS 268: 51-54
86. Barale, R., Migliore, L., Cellini, B., Francioni, L., Giorgelli, F., Barrai, I. and Loprieno, N. (1990)
Genetic toxicology of airborne particulate matter using cytogenetic assays and microbial mutagenicity assays.
In: *Genetic Toxicology of Complex Mixtures*, M.D. Waters et al. Eds. Plenum Press, New York, pp. 57-71

1991

87. Gamberini R., Canella R., Lucci M., Vullo C., Barrai I. (1991)
Reproductive behaviour of thalassemic couples segregating for Cooley's anemia
Am. J. Med. Genetics, 38: 103-106
88. Barrai, I., Nenci, I., Guidi, E., Dell'Acqua, G., Formica, G., Barbuiani, G., Marzola, A., Marani, G., Barale, R., Beretta, M. (1991)
Linkage of biopsy, cancer, and population records aimed at the estimation of family risks in neoplasia: a pilot study.
J. Epidemiol. Community Health, 45: 107-111
89. Guidi, E., Dell'Acqua, G., Scapoli, C., Barrai, I. (1991)
Epidemiology of infant deaths due to congenital malformations: Italy 1958-1981.
European J. Epidemiol. 7: 358-364
90. Gamberini, M.R., Lucci, M., Vullo, C., Anderson, B., Canella, R. and Barrai, I. (1991)
Reproductive behaviour of families segregating for Cooley's Anemia before and after the availability of prenatal diagnosis.
Journal of Medical Genetics, 28: 523-529
91. Barrai, I., Scapoli, C., Gambari, R., Brugnoli, F. (1991)
Frequencies of codons in histones, tubulins and fibrinogen: bias due to interference between transcription signals and protein function.
Journal of Theoretical Biology, 152: 405-426
92. R. Barale, L. Giromini, G. Ghelardini, C. Scapoli, N. Loprieno, M. Pala, F. Valerio and I. Barrai (1991)
Correlations between 15 polycyclic aromatic hydrocarbons (PAH) and the mutagenicity of the total PAH fraction in ambient air particles in La Spezia, Italy.

93. Barale, R., Giorgelli, R., Scarpato, R., Scapoli, C., Loprieno, N. and Barrai, I. (1991)
Correlation between mutagenicity of airborne particles and air pollution parameters in eleven Italian towns.
Int.l J. Environm. Health Res. 1: 37-53
94. Barrai, I., R. Canella, M. Beretta, E. Mamolini, R. Barale, C. Scapoli, and A. Ravani (1991)
Kinship structures and migration in the Po Delta
Ann. Hum. Genet. Lond., 55: 251-259
95. Volinia, S., Scapoli, C., Gambari, R., Barale, R. and Barrai, I. (1991)
A set of viral DNA decamers enriched in transcription control signals.
Nucleic Acids Res. 19: 3733-3740
96. Barrai, I., Scapoli, C., Canella, R., Formica, G., Barale, R., and Beretta, M. (1991)
Isonymy in birth and death records in Ferrara
Annals of Human Biology 18: 395-404

1992

97. Volinia S, Scapoli C, Gambari R, Barale R and Barrai I (1992)
Enrichment of oligonucleotide sets with transcription control signals. II: Mammalian DNA
Nucleic Acid Res. 20: 551-556
98. I. Barrai, G. Formica, C. Scapoli, M. Beretta, S. Volinia, R. Barale, P. Ambrosino and F. Fontana (1992)
Microevolution in Ferrara: isonymy 1890-1990
Annals of Human Biology, 19: 371-385
99. I. Barrai, R. Barale, C. Scapoli, P. Ambrosino, M. Beretta, C. Sbrana, R. Micheletti, and N. Loprieno (1992)
The analysis of the joint effect of substances on reversion systems and the assessment of antimutagenicity.
Mutation Research, 267: 172-182
100. Barale R., C. Scapoli, A. Falezza, L. Ventura, F. Bernacchi, N. Loprieno and I. Barrai (1992)
Skin cytogenetic assay for the detection of clastogens carcinogens topically administered to mice.
Mutation Research, 271: 223-230
101. Barrai, I., M. Beretta E. Mamolini C. Scapoli R. Canella R. Barale C. Vullo and A. Ravani (1992)
Genetic structures in the Po Delta: principal components, systemic functions and the relative age of the beta-thalassemia polymorphism.
Human Genetics, 88: 613-618
102. Pons de Leon, M., Scapoli, C., Zanghieri, G., Sassatelli, R., Sacchetti, C., and Barrai, I. (1992)
Genetic transmission of colorectal cancer: exploratory

data analysis from a population based registry.
J. Med. Genet., 29: 531-538

103. Barrai, I. (1992)
Kinship profiles and their error
Ann. Hum. Genet. 56: 77-78
104. Mamolini, E., Beretta, M., Cappellozza, G., Moncinelli, P., Scapoli, C., Barale, R., and Barrai, I. (1992)
Genetic structures in the population of the Veneto.
Human Heredity, 42: 347-359
1.302 0.372
105. Barale R, Barrai I, Di Mario F, Scarpato R, Strano A, Curtiss A, Campagne R, and Loprieno N (1992)
Airborne mutagenicity assessment in an industrial area in Italy
Fresenius Environmental Bulletin, 1: 184-190
106. Barrai, I. and Rodriguez-Larralde, A. (1992)
The probability of matching genetic markers in different samples
International Journal of Anthropology, 7: 71-78

1993

107. M. Beretta, E. Mamolini, A. Ravani, C. Scapoli, R. Barale, A. Rodriguez-Larralde and I. Barrai (1993)
Comparison of structures from frequencies of genes and surnames in the population of Ferrara
Human Biology, 65: 225-235
108. Rodriguez-Larralde, A., Barrai, I., and Alonso, J.C. (1993)
Isonymy in 4 Venezuelan States
Annals of Human Biology, 20: 131-145
109. G. Schiliro', A. Rodriguez-Larralde, E. Mamolini, C. Scapoli and I. Barrai (1993)
Isonymy in haemoglobinopathies in a sicilian sample
Human Heredity, 43: 203-204
110. Rodriguez-Larralde, A., G. Formica, C. Scapoli, M. Beretta, E. Mamolini and I. Barrai (1993)
Microevolution in Perugia: isonymy 1890-1990
Annals of Human Biology, 20: 261-274
0.678 0.226
111. Barrai, I. (1993)
The origin of HbS in Sicily: a toponymic study
Human Evolution, 8: 33-42
112. R. Barale, C. Scapoli, C. Meli, D. Casini, M. Minunni, A. Marazzini, N. Loprieno and I. Barrai (1993)
Cytogenetic effects of benzimidazoles in mouse bone marrow.
Mutation Research, 300: 15-26
113. Barrai, I. (1993)
A chi square for non-linear trends in proportion and fre

quencies.

Mutation Research, 300: 26-28

114. Barrai, I., Coletti, G. Di Bacco, M., Eds. (1992)
Probability and Bayesian Statistics in Medicine and Biology, pp. 1-297
Appl. Math. Monogr., National Research Council, Giardini Editori e Stampatori, Pisa.
115. R. Barale , F. Di Marino, R. Scarpato, A. Curti, R. Campagna, N. Loprieno, and I. Barrai (1993)
Two years' air mutagenicity monitoring in a north western rural area of Italy with an industrial plant
Mutation Research, 319: 293-301
116. Barale, R, Micheletti, R, Sbrana, C, Giussich, I, Scapoli, C, and Barrai, I (1993)
N-Acetylcysteine inhibits Diesel extract mutagenicity in the Ames test and Sister Chromatid Exchange induction in human lymphocytes
In: Antimutagenesis and Anticarcinogenesis Mechanisms III, pages 149-160, Plenum Publishing Corporation, New York, N.Y.
117. Scapoli, C., Rodriguez-Larralde, A., Volinia, S. Gambari, R, and Barrai, I. (1993)
Enrichment of oligonucleotide sets with transcription signals. III: DNA of non-mammalian vertebrates.
CABIOS, 9: 647-651
118. Barrai, I., Volinia, S. and Scapoli, C. (1993)
The usage of oligopeptides in proteins correlates negatively with molecular weight.
Minerva Biotecnologica, 5: 147-150
119. R. Gambari, S. Volinia, G. Feriotto, C. Nesti, C. Mischiati, C. Scapoli and I. Barrai (1993)
Computer-assisted production of sets of frequent DNA decamers enriched of transcription control signals.
Minerva Biotecnologica, 5: 193-198
120. Barale R., Barrai I, Sbrana I, Migliore L, Marrazzini A., Scarcelli V., Bacci E., Di Sibio A., Tessa A, Cocchi L., Lubrano V., Vassalle C., He J. (1993)
Monitoring human exposure to urban air pollutants
Env. Health Persp. Supplements, 101: 89-95

1994

121. Rodriguez-Larralde, A. Pavesi, C. Scapoli, F. Conterio, G. Siri, and I. Barrai (1994)
Isonomy and the genetic structure of Sicily
J. of BioSciences, 26: 9-24
122. Barrai, I., C. Scapoli, C. Nesti, G. Poli, R. Gambari (1), and M. Beretta (1994)
Codon usage and evolutionary rates of proteins
J. Theor. Biol. 166: 331-337
123. Barrai, I., C. Scapoli and C. Nesti (1994)
Possible identity of transcription and translation signals

in early vital systems.
J. theor. Biol. 169: 289-294

124. Scapoli C., M. Ponz de Leon, R. Sassatelli, P. Benatti, L. Roncucci, A. Collins, N.E. Morton, and I. Barrai (1994) Genetic epidemiology of hereditary non polyposis colorectal cancer syndromes in Modena, Italy: results of a complex segregation analysis
Annals of Human Genetics, Lond. 58: 275-295
125. Scapoli, C., Rodriguez-Larralde, A., Volinia, S., Beretta, M. and I. Barrai (1994) Identification of a set of frequent decanucleotides in plants and animals
CABIOS 10: 465-70
126. Gambari, R., Volinia, S., Nesti, C., Scapoli, C., and Barrai, I. (1994) A set of Alu-free frequent decamers from mammalian genomes enriched in transcription factor signals.
CABIOS 10: 501-508
127. Marrazzini A, Betti C, Bernacchi F, Barrai I and Barale R (1994) Micronucleus test and metaphase analyses in mice exposed to known and suspected spindle poisons.
Mutagenesis 9: 505-515
128. Barale, R., Giromini, L., Del Ry, S., Barnini, B., Bulleri, M., Barrai, I., Valerio, F., Pala, M., and He, J. (1994) Chemical and mutagenic patterns of airborne particulate matter collected in 17 italian towns.
Env. Health Perspec. 102, Suppl. 4, 67-73
129. Marrazzini, A., L. Chelotti, I. Barrai, N. Loprieno, and R. Barale (1994) In vivo genotoxic interactions among three phenolic benzene metabolites.
Mutation Research 341: 29-46

1995

130. I. Barrai, S. Volinia and C. Scapoli (1995) The usage of oligopeptides in proteins correlates negatively with molecular weight
Int. J. Peptide Protein Research, 45: 326-331
131. Nesti C., Scapoli C., Chicca M., Ambrosino P., and Barrai I. (1995) Phylogeny inferred from codon usage pattern in 31 organisms
CABIOS, 11: 167-171

1996

132. Barrai, I., C. Scapoli, M. Beretta, C. Nesti, E. Mamolini, A. Rodriguez-Larralde (1996) Isonomy and the genetic structure of Switzerland. I: The distributions of surnames.
Annals Hum. Biol., 23: 431-455

132 bis. Barrai I, Scapoli C, Fontana F (1996)
L'origine del codice genetico
Acc. Naz. Lincei , Anno CCCXCIII, N. 94: 103-123

1997

133. Rodriguez-Larralde, A. and Barrai, I. (1997)
Isonomy structure of Sucre and Tachira, two Venezuelan States.
Human Biology, 69: 715-731
134. I. Barrai, C. Scapoli, Beretta, M., C. Nesti, E. Mamolini and A. Rodriguez-Larralde (1997)
Isolation by distance in Germany
Human Genetics, 100: 684
135. Scapoli C, Rodriguez-Larralde A, Beretta C. NestiC, Lucchetti A and I. Barrai (1997)
Correlations between isonymy parameters
Int. J. Anthr. 12: 17-37
136. Rodriguez-Larralde, A., and Barrai, I. (1997)
Estructura genetica por isonimia de los estados Anzoategui y Trujillo, Venezuela.
Rev. Esp. Antrop. Biol., 18: 39-56

1998

137. Mamolini E., M. Beretta, R. Barale, A. Rodriguez-Larralde and I. Barrai (1998).
Detection of genetic structures at short distances in the Pisa area
Human Heredity, 48: 12-23
138. Rodriguez-Larralde, A., C. Scapoli, M. Beretta, C. Nesti, E. Mamolini, I. Barrai (1998)
Isonomy and the genetic structure of Switzerland. II.
Isolation by distance.
Annals of Human Biology, 25: 533-540
139. Rodriguez-Larralde, A., I. Barrai , C. Nesti, E. Mamolini, C. Scapoli (1998)
Isonomy and isolation by distance in Germany
Human Biology 70: 1041-1076
140. Scapoli C. and Barrai I. (1998)
Ordered variability of evolutionary rates in tubulins.
Atti Accad. Sci. Ferrara, vol 74, 235-255
141. Rodriguez-Larralde A. and I. Barrai (1998)
Estudio genetico demografico del estado Zulia, Venezuela,
a traves de isonimia.
Acta Cientifica Venezolana, 49: 143-143

1999

142. Scapoli C., E. Venturi, A. Rodriguez-Larralde and I. Barrai (1999)
Correlations in aminoacid and codon usage between organisms.
Atti Accad. Sci. Ferrara, vol 75, 149-165
143. Barrai, I., A. Rodriguez-Larralde, E. Mamolini, and C. Scapoli (1999)
Isonymy and isolation by distance in Italy
Human Biology 71: 947-961

2000

144. Rodriguez-Larralde, A., Morales, J., Barrai, I. (2000)
Surname frequency and the isonymy structure of Venezuela
Am. J. Hum. Biol., 12(3): 352-362
145. M. Biondolillo, E. Mamolini, F. Manni, C. Scapoli, L. Lorenzetti and I. Barrai (2000)
The VNTR loci APOB3' and D1S80 in Recanati, Central Italy.
J. of Forensic Sciences, 45: 1062-1064.
146. Barrai, I., A. Rodriguez-Larralde, E. Mamolini, F. Manni,
and C. Scapoli (2000)
Elements of the surname structure of Austria
Ann. Hum. Biol. 27: 607-622

2001

147. Barrai, I., A. Rodriguez-Larralde, E. Mamolini, F. Manni,
and C. Scapoli (2001)
Isonymy structure of the USA population.
Am J Phys Anthr 114: 109-123
148. Mamolini, E., M. Biondolillo, M. Marzari, S. Squarzoni, C.
Scapoli, L. Lorenzetti and I. Barrai (2001)
Comparison of the forensic utilities derived from nine
enzymatic and two VNTR loci in Recanati, Central Italy.
Atti Acc. Sci. Ferrara, submitted.

2002

149. Barrai I, Rodriguez-Larralde A, Manni F, Scapoli C (2002)
Isonymy and isolation by distance in the Netherlands.
Human Biology 74: 263-283

2003

150. Rodriguez-Larralde A, Gonzales-Martin A, Scapoli C, Barrai I
(2003)
The names of Spain: a study of the isonymy structure of
Spain.

2004

151. Barrai I, Rodriguez-Larralde A, Manni F, Ruggiero V, Tartari D, Scapoli C. (2004)
Isolation by language and distance in Belgium.
Ann Hum Genet 68: 1-16.

2005

152. Dipierri JE, Alfaro EL, Scapoli C, Mamolini E, Rodriguez-Larralde, Barrai I (2005)
Surnames in Argentina: a population study through isonymy.
Am J Hum Anthr 128: 199-209
153. Scapoli C, Goebel H, Sobota S, Mamolini E, Rodriguez-Larralde A, Barrai I (2005)
Surnames and dialects in France: population structure and cultural evolution.
J Theor Biol. 237:75-86.

2007

154. Scapoli C, Mamolini E, Carrieri A, Rodriguez-Larralde A, Barrai I (2007)
Surnames in Western Europe: A comparison of the subcontinental populations through isonymy.
Theor Popul Biol. 71: 37-48.
155. Scapoli C, Di Lorenzo S, Salvatorelli G, Barrai I (2007)
Aminoacid and codon usage in two influenza viruses and three hosts.
Medecine et Maladies Infectieuses 37: 337-42.
156. Dipierri JE, Rodriguez-Larralde A, Alfaro EL, Barrai I. (2007)
Isonymic structure of the Argentine Northwest.
Ann Hum Biol. 34: 498-503.
157. Rodriguez-Larralde A, Scapoli C, Mamolini E, Barrai I (2007)
Surnames in Texas: a population study through isonymy
Hum Biol. 79: 215-239

2008

158. Barrai I, Salvatorelli G, Mamolini E, De Lorenzi S, Carrieri A, Rodriguez-Larralde A, Scapoli C
General Preadaptation of Viral Infectors to Their Hosts. Intervirology 2008 May 21; 51(2): 101-111
159. Tarskaia L, El'chinova GI, Scapoli C, Mamolini E, Carrieri A, Rodriguez-Larralde A, Barrai I.
Surnames in Siberia: A study of the population of Yakutia through isonymy.
Am J Phys Anthropol. 2008 Aug 18. [Epub ahead of print]
PMID: 18711742 [PubMed - as supplied by publisher]

2009

160. Bronberg RA, Dipierri JE, Alfaro EL, Barrai I, Rodríguez-Larralde A, Castilla EE, Colonna V, Rodríguez-Arroyo G, Bailliet G.

Isonymy structure of Buenos Aires city.

Hum Biol. 2009 Aug;81(4):447-61. PMID: 20067369

161. Scapoli C, Bartolomei E, De Lorenzi S, Carrieri A, Salvatorelli G, Rodriguez-Larralde A, Barrai I.

Codon and aminoacid usage patterns in mycobacteria.

J Mol Microbiol Biotechnol. 2009;17(2):53-60. Epub 2009 Jan 21. PMID: 19153473

2010

162. Rodriguez-Larralde A, Dipierri J, Alfaro E, Scapoli C, Mamolini E, Salvatorelli G, De Lorenzi S, Carrieri A, Barrai I (2010) Surnames in Bolivia. A study of the population of Bolivia through isonymy. American Journal of Physical Anthropology, xxx: yyy-zzz.