

Table S1. Full search details for all databases

| Database | Keywords | Papers founded |
|--|---|----------------|
| PubMed | Zinc + dietary + Autoimmune Diseases | 106 |
| | Zinc + supplement + Autoimmune Diseases | 34 |
| | Zinc + serum + Autoimmune Diseases | 167 |
| | Zinc + plasma + Autoimmune Diseases | 126 |
| | Zinc + dietary + Autoimmunity | 21 |
| | Zinc + supplement + Autoimmunity | 2 |
| | Zinc + serum + Autoimmunity | 16 |
| | Zinc + plasma + Autoimmunity | 10 |
| Cochrane Central Register of Controlled Trials | Zinc + dietary + Autoimmune Diseases | 1 |
| | Zinc + supplement + Autoimmune Diseases | 1 |
| | Zinc + serum + Autoimmune Diseases | 0 |
| | Zinc + plasma + Autoimmune Diseases | 0 |
| | Zinc + dietary + Autoimmunity | 2 |
| | Zinc + supplement + Autoimmunity | 1 |
| | Zinc + serum + Autoimmunity | 1 |
| | Zinc + plasma + Autoimmunity | 0 |
| Web of Science | Zinc + dietary + Autoimmune Diseases | 12 |
| | Zinc + supplement + Autoimmune Diseases | 3 |
| | Zinc + serum + Autoimmune Diseases | 67 |
| | Zinc + plasma + Autoimmune Diseases | 23 |
| | Zinc + dietary + Autoimmunity | 11 |
| | Zinc + supplement + Autoimmunity | 4 |
| | Zinc + serum + Autoimmunity | 45 |
| | Zinc + plasma + Autoimmunity | 12 |
| Science Direct | Zinc + dietary + Autoimmune Diseases | 3,167 |
| | Zinc + supplement + Autoimmune Diseases | 3,354 |
| | Zinc + serum + Autoimmune Diseases | 6,980 |
| | Zinc + plasma + Autoimmune Diseases | 5,790 |
| | Zinc + dietary + Autoimmunity | 946 |
| | Zinc + supplement + Autoimmunity | 976 |
| | Zinc + serum + Autoimmunity | 2,314 |
| | Zinc + plasma + Autoimmunity | 1,903 |

Table S2. List of the 13 papers excluded because not possible to retrieve with the means available to the Italian library system

| Title | Authors | Year | Source |
|---|---|-------------|---|
| Penicillamine in rheumatoid arthritis. Connective tissue changes and alterations in serum copper and phase reactants in relation to clinical improvement. | Hansen, T.M.; Manthorpe, R.; Kofod, B.; Andreassen, T.; Oxlund, H.; Lorenzen, I.B. | 1976 | J Rheumatol. 3, 367-74. |
| Plasma zinc levels in multiple sclerosis. | Wong Jr.; E.K.; Enomoto, H.; Leopold, I.H.; Fleischer, E.B.; Schoon, D.V.; Fender, D.; Tucker, H.G.; Adamson, B.; Kladde, L.; Kazan, D.; Nudleman, K. | 1980 | Metabolic and pediatric ophthalmology, 4, 3-8. |
| Serum copper and zinc in rheumatoid arthritis and osteoarthritis. | Grennan, D.M.; Knudson, J.M.L.; Dunckley, J.; MacKinnon, M.J.; Myers, D.B.; Palmer, D.G. | 1980 | New Zealand Medical Journal, 91, 47-50. |
| Zinc nutriture in type I diabetes mellitus: relationship to growth measures and metabolic control. | Canfield, W.K.; Hambidge, K.M.; Johnson, L.K. | 1984 | J Pediatr Gastroenterol Nutr. 3, 577-584 |
| Magnesium and zinc in diabetic pregnancy. | Wibell, L.; Gebre-Medhin, M.; Lindmark, G. | 1985 | Acta Paediatrica Scandinavica, 74, 100-106. |
| Trace elements (copper, zinc and iron) in serum of rheumatic children living in south-western Finland. | Hyörä, H.; Mäkelä, A.; Pakarinen, P.; Bergman, T.; Näntö, V. | 1986 | Acta Pharmacologica et Toxicologica, 59, 403-405. |
| Effects of chronic and acute corticosteroid therapy on zinc and copper status in rheumatoid arthritis patients. | Peretz, A.; Neve, J.; Famaey, J.P. | 1989 | Journal of trace elements and electrolytes in health and disease, 3, 103-108. |
| Vitamins A and E, retinol binding protein and zinc in rheumatoid arthritis. | Honkanen, V.; Konttinen, Y.T.; Mussalo-Rauhamaa, H. | 1989 | Clinical and experimental rheumatology, 7, 465-469. |
| Serum zinc, copper and selenium in rheumatoid arthritis. | Honkanen, V.; Konttinen, Y.; Sorsa, T.; Hukkanen, M.; Kempainen, P.; Santavirta, S.; Saari, H.; Westermarck, T. | 1991 | Journal of trace elements and electrolytes in health and disease, 5, 261-263. |
| Effect of a strict vegan diet on energy and nutrient intakes by Finnish rheumatoid patients. | Rauma, A.; Nenonen, M.; Helve, T.; Hanninen, O. | 1993 | European Journal of Clinical Nutrition, 47, 747-749. |
| Low plasma zinc levels in active rheumatoid arthritis. | Weinstein, A | 1998 | The Journal of rheumatology, 25, 187-188. |
| Copper, zinc and magnesium levels in type-1 diabetes mellitus. | Zargar, A.H.; Bashir, M.I.; Masoodi, S.R.; Laway, B.A.; Wani, A.I.; Khan, A.R.; Dar, F.A. | 2002 | Saudi Medical Journal, 23, 539-542. |
| New potential serum biomarkers in multiple sclerosis identified by proteomic strategies. | Amin, B.; Maurer, A.; Voelter, W.; Melms, A.; Kalbacher, H. | 2014 | Current medicinal chemistry, 21, 1544-1556. |

Figure S1

