

Osteoporosis

Synonyms : Post-Traumatic Osteoporosis; Age-Related Bone Loss; Age-Related Osteoporosis; Senile Osteoporosis

Biomarker Associations



Biomarkers associated with Osteoporosis (30 biomarkers)

Gene/Protein <a href="#">[details-all]</a> <a href="#">[Sort alphabetically]</a>	Type of Association				Indication		
	<u>Causal</u> <a href="#">[details]</a> (14 associations)	<u>Correlative</u> <a href="#">[details]</a> (34 associations)	<u>Preventative</u> <a href="#">[details]</a> (9 associations)	<u>Negative</u> <a href="#">[details]</a> (8 associations)	<u>Disease Mechanism</u> <a href="#">[details]</a> (10 associations)	<u>Prognosis</u> <a href="#">[details]</a> (3 associations)	<u>Therapeutic Target</u> <a href="#">[details]</a> (11 associations)
<b>LRP5</b> (8 associations) <a href="#">[details]</a>	✓ (5 associations)	✓ (3 associations)				✓ (1 associations)	
<b>PTH</b> (6 associations) <a href="#">[details]</a>	✓ (1 associations)	✓ (2 associations)	✓ (3 associations)		✓ (2 associations)	✓ (1 associations)	✓ (4 associations)
<b>SHBG</b> (5 associations) <a href="#">[details]</a>		✓ (5 associations)					
<b>IGF-1</b> (4 associations) <a href="#">[details]</a>		✓ (2 associations)		✓ (2 associations)			
<b>col1A1</b> (4 associations) <a href="#">[details]</a>	✓ (2 associations)	✓ (2 associations)			✓ (2 associations)		

Select 10 entries at a time:

- 1-10
- 11-20
- 21-30

[\[View all\]](#)

Clinical Trials



Drugs under clinical trial investigation for treatment of Osteoporosis (469 trials)

Provided by ClinicalTrials.gov

Drug	Phase	Study Title	Status	Start Date	End Date
<a href="#">Alendronate</a>	Phase 2	Alendronate and/or Parathyroid Hormone for Osteoporosis <a href="#">i</a> <a href="#">View study report</a>	Completed	August 1999	June 2006
<a href="#">Calcium</a>	Phase 2	Calcium and Bone Mass in Young Females <a href="#">i</a> <a href="#">View study report</a>	Completed	August 1991	December 2001
<a href="#">Alendronate</a>	Phase 3	Osteoporosis Prevention After Heart Transplant <a href="#">i</a> <a href="#">View study report</a>	Completed	September 1997	April 2002
<a href="#">Calcitriol</a>	Phase 3	Osteoporosis Prevention After Heart Transplant <a href="#">i</a> <a href="#">View study report</a>	Completed	September 1997	April 2002
<a href="#">Calcium</a>	Phase 2	Treatment of Calcium Deficiency in Young Women <a href="#">i</a> <a href="#">View study report</a>	Completed	January 1995	June 2000

[\[more ...\]](#)

Association Characteristics



Subtypes or forms of Osteoporosis

idiopathic; more severe; familial[\[details\]](#)

Biological processes affected by Osteoporosis

bone mineralization; collagen fibril organization; bone remodeling; response to glucocorticoid stimulus ...[\[details\]](#)

Cell types or tissues affected by Osteoporosis

osteoblasts; serum; monocytes[[details](#)]

### Diseases associated with Osteoporosis

Spinal Fractures; Celiac Disease; Fractures, Bone; Genetic Predisposition to Disease; Osteochondritis ...[[details](#)]

## Biomarker Search Tool



### Retrieve Osteoporosis biomarkers for analysis

Retrieve Osteoporosis biomarkers for export or for viewing in the BKL

Pathfinder:

Retrieve all:

Retrieve All Biomarkers

Limit to:

- |   |   |        |   |
|---|---|--------|---|
| b | Biomarkers with a disease relationship of | causes | 6 |
| e | Biomarkers with affected molecule type of | DNA    | 6 |
| e | Biomarkers expressed in                   | Serum  | 6 |

Retrieve

Note: Results are returned in the BioKnowledge Search window

## Mouse Models



### Mouse genes which provide a model for Osteoporosis when knocked out

[Abl](#); [amphiregulin](#); [beta2-microglobulin](#); [Biglycan](#); [Bmp3](#); [Clz](#); [CnAalpha](#); [Egr-1](#); [eNOS](#); [FCRG](#); [Gipr](#); [Lrp5](#); [Mchr1](#); [OPG](#); [STAT3](#); [Vav-3](#) [[details](#)]

## Identifiers



**BIOBASE accession** : DI000009558

**MeSH ID** : [D010024](#)

## References (52 entries)



- [1] *PMID 19727905*. Li, G. H., Kung, A. W., Huang, Q. Y., Common variants in FLNB/CRTAP, not ARHGEF3 at 3p, are associated with osteoporosis in southern Chinese women. *Osteoporos Int* 21 (6) 1009-20 (2010).
  - [2] *PMID 18084690*. Delany, A. M., McMahon, D. J., Powell, J. S., Greenberg, D. A., Kurland, E. S., Osteonectin/SPARC polymorphisms in Caucasian men with idiopathic osteoporosis. *Osteoporos Int* 19 (7) 969-78 (2008).
  - [3] *PMID 16777502*. Kung, A. W., Lai, B. M., Ng, M. Y., Chan, V., Sham, P. C., T-1213C polymorphism of estrogen receptor beta is associated with low bone mineral density and osteoporotic fractures. *Bone* 39 (5) 1097-106 (2006).
  - [4] *PMID 16543750*. Dusek, T., Korsic, M., Koehler, K., Perkovic, Z., Huebner, A., Korsic, M., A novel AAAS gene mutation (p.R194X) in a patient with triple A syndrome. *Horm Res* 65 (4) 171-6 (2006).
  - [5] *PMID 16168727*. Ferrari, S. L., Deutsch, S., Baudoin, C., Cohen-Solal, M., Ostertag, A., Antonarakis, S. E., Rizzoli, R., de Vernejoul, M. C., LRP5 gene polymorphisms and idiopathic osteoporosis in men. *Bone* 37 (6) 770-5 (2005).
- [[more . . .](#)]