



มหาวิทยาลัยมหิดล
Mahidol University
Wisdom of the Land



Innovative Products from Physiological Research

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How to start...

Work with basic science

Acquire strong basic knowledge and skill

Physiology | Finance | Law | Regulation

Market research

Carefully perform SWOT analysis

Intellectual Property (IP)

Patents

Copyrights

Trademarks

Trade secrets



Know your stakeholders

User | Private sector | Venture capitalist

University | Competitor | **Your team**

Understand types of research utilization

Academic use | Commercialization

Policy | Social and community

Monosaccharides

Peptides and Amino Acids

Vitamin D and derivatives

Probiotics and prebiotics

Microbiota

Fatty acid

Vitamin K



Aberrant FGF-23 production

Elevated FGF-23 level

Hypophosphatemia (renal wasting)

Inappropriately low level of 1,25-dihydroxyvitamin D

Rickets or osteomalacia



X-linked hypophosphatemic rickets (XLH)

- Mutations of a zinc metalloendopeptidase *PHEX*
- *PHEX* normally reduces FGF-23.
- Lower limb and spinal complications, such as
 - Bilateral bowed coxa vara deformity of femora
 - Hip osteoarthritis
 - Femoral shaft bowing
 - Ossification of the ligamentum flavum
 - Spinal canal stenosis

XLH can be treated by:

Monoclonal antibody against FGF-23



Conclusions

Work with basic science

