Biographical Sketch

Helen L. Yin Title: Professor Birthdate: 5/5/48

Education

Mount Holyoke College, South Hadley, MA	B.A.	1970	Biology
Harvard University, Boston, MA	Ph.D.	1976	Physiology
Rockefeller University, New York, NY	Postdoc.	1976-77	Cell Biology
Massachusetts General Hospital	Postdoc.	1977-79	Cell Biology

Experience

1979-80 Instructor in Medicine, Harvard Medical School, Boston, MA
1980-85 Assistant Professor of Medicine, Harvard Medical School
1985-89 Associate Professor of Medicine, Harvard Medical School
1989- Professor of Physiology, UT Southwestern Medical Center at Dallas

Awards, Honors, Committes

1970 Sigma Xi, Phi Beta Kappa
1975-77 Fellow of the Leukemia Society of America, Inc.
1977-79 NIH Research Fellowship
1979-82 Young Investigator Award, NIH
1984-89 Established Investigator, American Heart Association
1988-89 Member, NIH Molecular Cytology Study Section
1990-93 Member, NIH Cell Biology & Physiology Study Section
1990 Chairman, Gordon Research Conference, Motile and Contractile

Publications

Selected Original Publications

*Yin HL, Stossel TP. Control of cytoplasmic actin gel-sol transformation by gelsolin, a calcium-dependent protein. Nature. 1979;218:583-586.

Yin HL, Stossel TP. Purification and structural properties of gelsolin, a Ca^{2+}-activated regulatory protein of macrophages. J Biol Chem 1980;255:9490-93.

Yin HL, Zaner KS, Stossel TP. Ca^{2+} control of actin gelation. Interaction of gelsolin with actin filaments and regulation of actin gelation. J Biol Chem. 1981;255:9494-9500.

Yin HL, Hartwig JH, Maruyama K, Stossel TP. Ca^{2+} control of actin filament length. Effects of macrophage gelsolin on actin polymerization. J Biol Chem. 1981; 256:9693-9697.

Yin HL, Albrecht J, Fattoum A. Identification of gelsolin, a Ca^{2+}-dependent regulatory protein of actin gel-sol transformation and its intracellular distribution in a variety of cells and tissues. J Cell Biol 1981;91:901-6.

Lind S, Yin HL, Stossel TP. Human platelets contain gelsolin, a regulator of actin filament length. J Clin Invest. 1982;69:1384-1387.

Thorstensson R, Utter G, Norberg R, Frangaeus A, Hartwig JH, Yin HL, Stossel TP. Distribution of actin, myosin, actin-binding protein and gelsolin in cultured lymphoid cells. Exp Cell Res. 1982;140:395-400.

Yin HL, Kwiatkowski DJ, Mole JE, Cole FS. Structure and biosynthesis of cytoplasmic and secreted variants of gelsolin. J Biol Chem. 1984;259:5271-5276.

Janmey PA, Chaponnier C, Lind SE, Zaner KS, Stossel TP, Yin HL. Interactions of gelsolin and gelsolin:actin complexes with actin. Effects of calcium on actin nucleation, severing and end blocking. Biochemistry 1985;24:3714-23.

Janmey PA, Lind SE, Yin HL, Stossel TP. Effects of semi-dilute actin solutions on the mobility of fibrin protofibrils during clot formation. Biochem Biophys Acta. 1985;841:151-158.

Kwiatkowski DJ, Janmey PA, Mole JE, Yin HL. Isolation and properties of two actin-binding domains in gelsolin. J Biol Chem. 1985;260:15232-15238.

Chaponnier C, Janmey PA, Mole JE, Yin HL. The actin filament severing domain of plasma gelsolin. J Cell Biol. 1986;103:1473-1481.

Kwiatkowski DJ, Stossel TP, Orkin SH, Mole JE, Colten HR, Yin HL. Plasma and cytoplasmic gelsolins contain a duplicated actin-binding domain. Nature. 1986;323:455-458.

Chaponnier C, Yin HL, Stossel TP. Reversibility of gelsolin:actin interaction in marcophages: evidence for Ca^{2+}-independent pathways. J Exp Med. 1987;165:97-106.

Janmey PA, Iida K, Yin HL, Stossel TP. Polyphosphoinositide micelles and polyphosphoinositide-containing vesicles dissociate endogenous gelsolin-actin complexes and promote actin assembly from the fast growing end of actin filaments blocked by gelsolin. J Biol Chem. 1987;262:1228-36.

Kwiatkowski DJ, Mehl R, Yin HL. Genomic organization and biosynthesis of secreted and cytoplasmic forms of gelsolin. J Cell Biol 1988; 106:375-384.

*Yin HL, Iida K, Janmey PA. Identification of a polyphosphoinositide-modulated domain in gelsolin which binds to the side of actin filaments. J Cell Biol. 1988; 106:805-812.

Kwiatkowski DJ, Mehl RM, Izumo S, Nadal-Ginard G, Yin HL. Muscle is the primary source of gelsolin found in plasma. J Biol Chem. 1988; 263:8239-8243.

Sutoh K, Yin HL. End-label fingerprintings show that the N- and C-termini of actin are in contact site with gelsolin. Biochemistry 1989; 28:5269-5275.

*Kwiatkowski DJ, Janmey PA, Yin HL. Identification of critical functional and regulatory domains in gelsolin. J Cell Biol. 1989; 108:1717-1726.

Howard T, Chaponnier C, Yin HL, T Stossel. Gelsolin-actin interaction and actin polymerization in neutrophils. J Cell Biol. 1990; 110:1983-1991.

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*Yu F-X, Johnston PA, Sudhof TC, Yin HL. gCap39, A calcium ion- and polyphosphoinositide-regulated actin capping protein. Science. 1990, 250:1413-1415.

Johnston PA, Yu F-X, Reynolds GA, Yin HL, Moomaw CR, Slaughter CA, Sudhof TC. Purification and expression of gCap39. An intracellular and secreted Ca^{2+}-dependent actin-binding protein enriched in mononuclear phagocytes. J Biol Chem. 1990, 265:17946-17952.

*Yu F-X, Zhou D, Yin HL. Chimeric and truncated gCap39 elucidate the requirements for actin filament severing and end capping by the gelsolin family of proteins. J Biol Chem. 1991; 266:19269-19275.

Manuscripts under Review

Yu F-X, Sun H-Q, Janmey PA, Yin HL. Identification of a polyphosphoinositide (PPI) binding motif in gelsolin and other PPI-binding proteins.

Yu F-X, Lin S-C, Morrison-Bogorad M, Yin HL. β-Thymosins regulate actin filament assembly, and are modulated through capping and uncapping of filament "barbed" ends.

Current Abstracts

Yu F-X, Onoda K, Luby-Phelps K, Yin HL. 1991 Overexpression and microinjection of gCap39 have dramatic effects on actin stress fibers and cell shape. J. Cell Biol. 115:2187, 377a.

Onoda K, Yin HL. 1991 gCap39 is a nuclear as well as cytoplasmic protein which is phosphorylated in vivo. J. Cell Biol. 115:1896, 327a.

Yu F-X, Lin SC, Morrison-Bogorad M, Yin HL. 1991 Effects of β-Thymosin isoforms on actin filaments in vivo and in vitro. J Cell Biol. Special abst. ses.

Reviews (Recent)

Yin HL. Calcium and polyphosphoinositide regulation of actin network structure by gelsolin. In: Calcium Protein Signaling. Hidaka, H, Carafoli, E, Means AR, Tanaka, T, eds. Plenum Publishing Corp., 1989; pp. 315-323.

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Yin HL. Gelsolin. In: Cytoskeletal and Structural Proteins. R. Vale & T. Kreis, eds. Sambrook & Tooze publishers. 1991 (In press)

Yu F-X, Yin HL. gCap39. In: Cytoskeletal and Structural Proteins. R. Vale & T. Kreis, eds. Sambrook & Tooze publishers. 1991 (In press)