



William Weis

William M. Hume Professor in the School of Medicine, Professor of Structural Biology, of Molecular and Cellular Physiology and of Photon Science

Bio

ACADEMIC APPOINTMENTS

- Professor, Structural Biology
- Professor, Molecular & Cellular Physiology
- Member, Bio-X
- Member, Stanford Cancer Institute
- Faculty Fellow, Stanford ChEM-H

ADMINISTRATIVE APPOINTMENTS

- Director, Graduate Program in Biophysics, (1999-2008)
- Chair, Department of Photon Science, (2013-2016)
- Chair, Department of Structural Biology, (2014- present)

PROFESSIONAL EDUCATION

- A.B., Princeton University , Biochemical Sciences (1981)
- Ph.D., Harvard University , Biochemistry (1987)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Cadherin-based adhesion

Several distinct intercellular junctions connect epithelial cells. Two of these, the adherens junction and the desmosome, contain cadherin cell adhesion molecules. The extracellular regions of these transmembrane proteins mediate intercellular binding, while their cytoplasmic domains are linked to the actin- (adherens junction) or intermediate filament- (desmosome) based cytoskeletons. In this way the cytoskeletons of cells comprising a tissue are linked, imparting particular morphologies and mechanical strength to the tissue. The dynamics of these complex assemblies underlie changes in cell and tissue architecture that occur during development and in many cancers. Our current work aims to understand how junctional assemblies respond to and are regulated by mechanical force. We are also studying how the multiprotein junctional assemblies have changed as part of the the evolution of more complex multicellular animals.

Wnt signaling

The Wnt signaling pathway controls cell fate determination during embryogenesis and in the normal renewal of tissues in the adult. beta-catenin is the central component of this pathway, where it serves as a transcriptional coactivator. In the absence of a secreted Wnt protein, non-junctional beta-catenin is bound in a

multiprotein “destruction complex”. Formation of this complex promotes phosphorylation of beta-catenin, which targets it for degradation by the ubiquitin/proteasome pathway. Binding of a Wnt to cell surface receptors prevents phosphorylation of beta-catenin. The resulting stabilized beta-catenin enters the nucleus and activates transcription of Wnt target genes through its interactions with Tcf-family transcription factors, proteins that contain a beta-catenin-binding domain and a sequence-specific DNA-binding domain.

We are trying to understand the molecular mechanisms by which the destruction complex degrades beta-catenin, how binding of Wnts to their receptors turns off beta-catenin destruction, and how beta-catenin serves as a scaffold to link the sequence-specific Tcfs to components of the general transcription machinery. We are attempting to biochemically reconstitute these complexes for mechanistic and structural studies.

Intracellular vesicle trafficking and cell polarity

The directed movement of membranous vesicles is essential for maintaining the compartmentalized structure of the eukaryotic cell. The machinery responsible for this process is highly conserved amongst different intracellular trafficking pathways and amongst eukaryotes. An important example is the delivery of vesicles to particular regions of the plasma membrane, which is essential for maintaining the structure of polarized cells. We are studying proteins involved in the regulated movement, docking, and fusion of vesicles with their target membranes, and how this machinery interfaces with the cell adhesion machinery as part of establishing cell polarity.

Teaching

COURSES

2019-20

- Seminar in Biophysics: BIOPHYS 250 (Aut)

2018-19

- Methods in Molecular Biophysics: BIOPHYS 242, SBIO 242 (Win)
- Seminar in Biophysics: BIOPHYS 250 (Aut)

2017-18

- Seminar in Biophysics: BIOPHYS 250 (Aut)

2016-17

- Methods in Molecular Biophysics: BIOPHYS 242, SBIO 242 (Win)
- Seminar in Biophysics: BIOPHYS 250 (Aut)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Derek Huang, Amar Mirza, Leanna Owen, Youngsoo Rim, Kelsey Roberts

Postdoctoral Faculty Sponsor

Jacob Mahoney, Crissy Tarver

Doctoral Dissertation Advisor (AC)

Nick Bax, Elise Bruguera, Michael Enos, Darius Johnston, Andras Sagi

Doctoral Dissertation Co-Advisor (AC)

Amy Wang

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biophysics (Phd Program)

- Cancer Biology (Phd Program)
- Molecular and Cellular Physiology (Phd Program)
- Structural Biology (Phd Program)

Publications

PUBLICATIONS

- **The C-terminal Domain of Talin Forms a Force-responsive, Directional Catch Bond to F-actin**
Owen, L. M., Bax, N. A., Weis, W. I., Dunn, A. R.
CELL PRESS.2020: 31A
- **Extracellular matrix micropatterning technology for whole cell cryogenic electron microscopy studies** *JOURNAL OF MICROMECHANICS AND MICROENGINEERING*
Engel, L., Gaietta, G., Dow, L. P., Swif, M. F., Pardon, G., Volkmann, N., Weis, W., Hanein, D., Pruitt, B. L.
2019; 29 (11)
- **Binding partner- and force-promoted changes in alphaE-catenin conformation probed by native cysteine labeling.** *Scientific reports*
Terekhova, K., Pokutta, S., Kee, Y. S., Li, J., Tajkhorshid, E., Fuller, G., Dunn, A. R., Weis, W. I.
2019; 9 (1): 15375
- **FORCE-DEPENDENT ALLOSTERIC ENHANCEMENT OF AE-CATENIN BINDING TO F-ACTIN BY VINCULIN**
Bax, N., Huang, D., Pokutta, S., Dunn, A., Weis, W.
WILEY.2019: 83
- **Solving the structure of Lgl2, a difficult blind test of unsupervised structure determination** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Ufimtsev, I. S., Almagor, L., Weis, W. I., Levitt, M.
2019; 116 (22): 10819–23
- **Structural insights into the aPKC regulatory switch mechanism of the human cell polarity protein lethal giant larvae 2** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Almagor, L., Ufimtsev, I. S., Ayer, A., Li, J., Weis, W. I.
2019; 116 (22): 10804–12
- **Structural insights into the activation of metabotropic glutamate receptors (vol 566, pg 79, 2019)** *NATURE*
Koehl, A., Hu, H., Feng, D., Sun, B., Zhang, Y., Robertson, M. J., Chu, M., Kobilka, T., Laeremans, T., Steyaert, J., Tarrasch, J., Dutta, S., Fonseca, et al
2019; 567 (7747): E10
- **Author Correction: Structural insights into the activation of metabotropic glutamate receptors.** *Nature*
Koehl, A., Hu, H., Feng, D., Sun, B., Zhang, Y., Robertson, M. J., Chu, M., Kobilka, T. S., Laeremans, T., Steyaert, J., Tarrasch, J., Dutta, S., Fonseca, et al
2019
- **Force-Dependent Allosteric Enhancement of alpha e-Catenin Binding to F-Actin by Vinculin**
Bax, N. A., Huang, D. L., Pokutta, S., Dunn, A. R., Weis, W. I.
CELL PRESS.2019: 549A
- **Resolving indexing ambiguities in X-ray free-electron laser diffraction patterns.** *Acta crystallographica. Section D, Structural biology*
Uervirojnangkoorn, M., Lyubimov, A. Y., Zhou, Q., Weis, W. I., Brunger, A. T.
2019; 75 (Pt 2): 234–41
- **Structure of a Signaling Cannabinoid Receptor 1-G Protein Complex** *CELL*
Kumar, K., Shalev-Benami, M., Robertson, M. J., Hu, H., Banister, S. D., Hollingsworth, S. A., Latorraca, N. R., Kato, H. E., Hilger, D., Maeda, S., Weis, W. I., Farrens, D. L., Dror, et al
2019; 176 (3): 448+
- **CD23 is a glycan-binding receptor in some mammalian species.** *The Journal of biological chemistry*
Jégouzo, S. A., Feinberg, H., Morrison, A., Holder, A., May, A., Huang, Z., Jiang, L., Lasanajak, Y., Smith, D. F., Werling, D., Drickamer, K., Weis, W. I., Taylor, et al

2019

- **Publisher Correction: Structural insights into binding specificity, efficacy and bias of a beta2AR partial agonist.** *Nature chemical biology*
Masureel, M., Zou, Y., Picard, L., van der Westhuizen, E., Mahoney, J. P., Rodrigues, J. P., Mildorf, T. J., Dror, R. O., Shaw, D. E., Bouvier, M., Pardon, E., Steyaert, J., Sunahara, et al
2018
- **Structural insights into binding specificity, efficacy and bias of a beta2AR partial agonist.** *Nature chemical biology*
Masureel, M., Zou, Y., Picard, L., van der Westhuizen, E., Mahoney, J. P., Rodrigues, J. P., Mildorf, T. J., Dror, R. O., Shaw, D. E., Bouvier, M., Pardon, E., Steyaert, J., Sunahara, et al
2018; 14 (11): 1059–66
- **The Molecular Basis of G Protein-Coupled Receptor Activation.** *Annual review of biochemistry*
Weis, W. I., Kobilka, B. K.
2018; 87: 897–919
- **Structure of the μ -opioid receptor-Gi protein complex.** *Nature*
Koehl, A., Hu, H., Maeda, S., Zhang, Y., Qu, Q., Paggi, J. M., Latorraca, N. R., Hilger, D., Dawson, R., Matile, H., Schertler, G. F., Granier, S., Weis, et al
2018
- **Analysis of a vinculin homolog in a sponge (phylum Porifera) reveals that vertebrate-like cell adhesions emerged early in animal evolution.** *The Journal of biological chemistry*
Miller, P. W., Pokutta, S., Mitchell, J. M., Chodaparambil, J. V., Clarke, D. N., Nelson, W., Weis, W. I., Nichols, S. A.
2018
- **Epithelial barrier dysfunction in desmoglein-1 deficiency.** *The Journal of allergy and clinical immunology*
Polivka, L., Hadj-Rabia, S., Bal, E., Leclerc-Mercier, S., Madrange, M., Hamel, Y., Bonnet, D., Mallet, S., Lepidi, H., Ovaert, C., Barbet, P., Dupont, C., Neven, et al
2018
- **Vinculin forms a directionally asymmetric catch bond with F-actin** *SCIENCE*
Huang, D. L., Bax, N. A., Buckley, C. D., Weis, W. I., Dunn, A. R.
2017; 357 (6352): 703–6
- **Structural and functional characterization of Caenorhabditis elegans alpha-catenin reveals constitutive binding to beta-catenin and F-actin** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Kang, H., Bang, I., Jin, K. S., Lee, B., Lee, J., Shao, X., Heier, J. A., Kwiatkowski, A. V., Nelson, W. J., Hardin, J., Weis, W. I., Choi, H.
2017; 292 (17): 7077-7086
- **α -catenin reveals constitutive binding to β -catenin and F-actin.** *journal of biological chemistry*
Kang, H., Bang, I., Jin, K. S., Lee, B., Lee, J., Shao, X., Heier, J. A., Kwiatkowski, A. V., Nelson, W. J., Hardin, J., Weis, W. I., Choi, H.
2017; 292 (17): 7077-7086
- **Cell-cell adhesion in metazoans relies on evolutionarily conserved features of the β -catenin- α -catenin-binding interface.** *The Journal of biological chemistry*
Shao, X., Kang, H., Loveless, T., Lee, G. R., Seok, C., Weis, W. I., Choi, H. J., Hardin, J.
2017; 292 (40): 16477–90
- **Mechanism of pathogen recognition by human dectin-2.** *The Journal of biological chemistry*
Feinberg, H., Jégouzo, S. A., Rex, M. J., Drickamer, K., Weis, W. I., Taylor, M. E.
2017; 292 (32): 13402–14
- **Mechanism of intracellular allosteric β 2AR antagonist revealed by X-ray crystal structure.** *Nature*
Liu, X., Ahn, S., Kahsai, A. W., Meng, K. C., Latorraca, N. R., Pani, B., Venkatakrisnan, A. J., Masoudi, A., Weis, W. I., Dror, R. O., Chen, X., Lefkowitz, R. J., Kobilka, et al
2017; 548 (7668): 480–84
- **Structure of photosystem II and substrate binding at room temperature** *NATURE*
Young, I. D., Ibrahim, M., Chatterjee, R., Gul, S., Fuller, F. D., Koroidov, S., Brewster, A. S., Tran, R., Alonso-Mori, R., Kroll, T., Michels-Clark, T., Laksmono, H., Sierra, et al
2016; 540 (7633): 453–?

- **Advances in X-ray free electron laser (XFEL) diffraction data processing applied to the crystal structure of the synaptotagmin-1 / SNARE complex.** *eLife*
Lyubimov, A. Y., Uervirojnangkoom, M., Zeldin, O. B., Zhou, Q., Zhao, M., Brewster, A. S., Michels-Clark, T., Holton, J. M., Sauter, N. K., Weis, W. I., Brunger, A. T.
2016; 5
- **Binding Sites for Acylated Trehalose Analogs of Glycolipid Ligands on an Extended Carbohydrate Recognition Domain of the Macrophage Receptor Mincle** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Feinberg, H., Rambaruth, N. D., Jegouzo, S. A., Jacobsen, K. M., Djurhuus, R., Poulsen, T. B., Weis, W. I., Taylor, M. E., Drickamer, K.
2016; 291 (40): 21222-?
- **Characterization of the Cadherin-Catenin Complex of the Sea Anemone *Nematostella vectensis* and Implications for the Evolution of Metazoan Cell-Cell Adhesion** *MOLECULAR BIOLOGY AND EVOLUTION*
Clarke, D. N., Miller, P. W., Lowe, C. J., Weis, W. I., Nelson, W. J.
2016; 33 (8): 2016-2029
- **Allosteric nanobodies reveal the dynamic range and diverse mechanisms of G-protein-coupled receptor activation** *NATURE*
Staus, D. P., Strachan, R. T., Manglik, A., Pani, B., Kahsai, A. W., Kim, T. H., Wingler, L. M., Ahn, S., Chatterjee, A., Masoudi, A., Kruse, A. C., Pardon, E., Steyaert, et al
2016; 535 (7612): 448-?
- **IOTA: integration optimization, triage and analysis tool for the processing of XFEL diffraction images** *JOURNAL OF APPLIED CRYSTALLOGRAPHY*
Lyubimov, A. Y., Uervirojnangkoom, M., Zeldin, O. B., Brewster, A. S., Murray, T. D., Sauter, N. K., Berger, J. M., Weis, W. I., Brunger, A. T.
2016; 49: 1057-1064
- **Crystal structures of the M1 and M4 muscarinic acetylcholine receptors.** *Nature*
Thal, D. M., Sun, B., Feng, D., Nawaratne, V., Leach, K., Felder, C. C., Bures, M. G., Evans, D. A., Weis, W. I., Bachhawat, P., Kobilka, T. S., Sexton, P. M., Kobilka, et al
2016; 531 (7594): 335-340
- **Purification, crystallization and initial crystallographic analysis of the alpha-catenin homologue HMP-1 from *Caenorhabditis elegans*** *ACTA CRYSTALLOGRAPHICA SECTION F-STRUCTURAL BIOLOGY COMMUNICATIONS*
Kang, H., Bang, I., Weis, W. I., Choi, H.
2016; 72: 234-239
- **A Small-Molecule Antagonist of the beta-Catenin/TCF4 Interaction Blocks the Self-Renewal of Cancer Stem Cells and Suppresses Tumorigenesis** *CANCER RESEARCH*
Fang, L., Zhu, Q., Neuenschwander, M., Specker, E., Wulf-Goldenberg, A., Weis, W. I., von Kries, J. P., Birchmeier, W.
2016; 76 (4): 891-901
- **Structure of the Intermediate Filament-Binding Region of Desmoplakin** *PLOS ONE*
Kang, H., Weiss, T. M., Bang, I., Weis, W. I., Choi, H.
2016; 11 (1)
- **Purification and Structural Analysis of Desmoplakin.** *Methods in enzymology*
Choi, H. J., Weis, W. I.
2016; 569: 197-213
- **25 Years of Tension over Actin Binding to the Cadherin Cell Adhesion Complex: The Devil is in the Details.** *Trends in cell biology*
Nelson, W. J., Weis, W. I.
2016; 26 (7): 471-73
- **High-density grids for efficient data collection from multiple crystals.** *Acta crystallographica. Section D, Structural biology*
Baxter, E. L., Aguila, L., Alonso-Mori, R., Barnes, C. O., Bonagura, C. A., Brehmer, W., Brunger, A. T., Calero, G., Caradoc-Davies, T. T., Chatterjee, R., DeGrado, W. F., Fraser, J. S., Ibrahim, et al
2016; 72: 2-11
- **Reevaluating alpha E-catenin monomer and homodimer functions by characterizing E-cadherin/alpha E-catenin chimeras** *JOURNAL OF CELL BIOLOGY*
Bianchini, J. M., Kitt, K. N., Gloerich, M., Pokutta, S., Weis, W. I., Nelson, W. J.
2015; 210 (7): 1065-1074
- **Architecture of the synaptotagmin-SNARE machinery for neuronal exocytosis.** *Nature*

- Zhou, Q., Lai, Y., Bacaj, T., Zhao, M., Lyubimov, A. Y., Uervirojnangkoon, M., Zeldin, O. B., Brewster, A. S., Sauter, N. K., Cohen, A. E., Soltis, S. M., Alonso-Mori, R., Chollet, et al
2015; 525 (7567): 62-67
- **Structural insights into μ -opioid receptor activation.** *Nature*
Huang, W., Manglik, A., Venkatakrishnan, A. J., Laeremans, T., Feinberg, E. N., Sanborn, A. L., Kato, H. E., Livingston, K. E., Thorsen, T. S., Kling, R. C., Granier, S., Gmeiner, P., Husbands, et al
2015; 524 (7565): 315-321
 - **A Novel Mechanism for Binding of Galactose-terminated Glycans by the C-type Carbohydrate Recognition Domain in Blood Dendritic Cell Antigen 2.** *journal of biological chemistry*
Jégouzo, S. A., Feinberg, H., Dugarwalla, T., Drickamer, K., Weis, W. I., Taylor, M. E.
2015; 290 (27): 16759-16771
 - **The linac coherent light source single particle imaging road map** *STRUCTURAL DYNAMICS*
Aquila, A., Barty, A., Bostedt, C., Boutet, S., Carini, G., Deponte, D., DRELL, P., Doniach, S., Downing, K. H., Earnest, T., Elmlund, H., Elser, V., Guehr, et al
2015; 2 (4)
 - **Munc18a Does Not Alter Fusion Rates Mediated by Neuronal SNAREs, Synaptotagmin, and Complexin.** *journal of biological chemistry*
Zhang, Y., Diao, J., Colbert, K. N., Lai, Y., Pfuetzner, R. A., Padolina, M. S., Vivona, S., Ressler, S., Cipriano, D. J., Choi, U. B., Shah, N., Weis, W. I., Brunger, et al
2015; 290 (16): 10518-10534
 - **A Conserved Phosphorylation Switch Controls the Interaction between Cadherin and beta-Catenin In Vitro and In Vivo** *DEVELOPMENTAL CELL*
Choi, H., Loveless, T., Lynch, A. M., Bang, I., Hardin, J., Weis, W. I.
2015; 33 (1): 82-93
 - **Enabling X-ray Free Electron Laser Crystallography for Challenging Biological Systems from a Limited Number of Crystals** *ELIFE*
Uervirojnangkoon, M., Zeldin, O. B., Lyubimov, A. Y., Hattne, J., Brewster, A. S., Sauter, N. K., Brunger, A. T., Weis, W. I.
2015; 4
 - **Data Exploration Toolkit for serial diffraction experiments** *ACTA CRYSTALLOGRAPHICA SECTION D-BIOLOGICAL CRYSTALLOGRAPHY*
Zeldin, O. B., Brewster, A. S., Hattne, J., Uervirojnangkoon, M., Lyubimov, A. Y., Zhou, Q., Zhao, M., Weis, W. I., Sauter, N. K., Brunger, A. T.
2015; 71: 352-356
 - **Three aSNAP and 10 ATP Molecules Are Used in SNARE Complex Disassembly by N-ethylmaleimide-sensitive Factor (NSF).** *journal of biological chemistry*
Shah, N., Colbert, K. N., Enos, M. D., Herschlag, D., Weis, W. I.
2015; 290 (4): 2175-2188
 - **Studying epithelial morphogenesis in Dictyostelium.** *Methods in molecular biology (Clifton, N.J.)*
Dickinson, D. J., Nelson, W. J., Weis, W. I.
2015; 1189: 267-281
 - **Reevaluating β -catenin monomer and homodimer functions by characterizing E-cadherin/ β -catenin chimeras.** *The Journal of cell biology*
Bianchini, J. M., Kitt, K. N., Gloerich, M., Pokutta, S., Weis, W. I., Nelson, W. J.
2015; 210 (7): 1065-74
 - **Mapping the conformational landscape of a dynamic enzyme by multitemperature and XFEL crystallography.** *eLife*
Keedy, D. A., Kenner, L. R., Warkentin, M., Woldeyes, R. A., Hopkins, J. B., Thompson, M. C., Brewster, A. S., Van Benschoten, A. H., Baxter, E. L., Uervirojnangkoon, M., McPhillips, S. E., Song, J., Alonso-Mori, et al
2015; 4
 - **Goniometer-based femtosecond crystallography with X-ray free electron lasers** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Cohen, A. E., Soltis, S. M., Gonzalez, A., Aguila, L., Alonso-Mori, R., Barnes, C. O., Baxter, E. L., Brehmer, W., Brewster, A. S., Brunger, A. T., Calero, G., Chang, J. F., Chollet, et al
2014; 111 (48): 17122-17127
 - **Modified T4 Lysozyme Fusion Proteins Facilitate G Protein-Coupled Receptor Crystallogenesis** *STRUCTURE*
Thorsen, T. S., Matt, R., Weis, W. I., Kobilka, B. K.

2014; 22 (11): 1657-1664

- **Mechano-Transduction: From Molecules to Tissues** *PLOS BIOLOGY*
Pruitt, B. L., Dunn, A. R., Weis, W. I., Nelson, W. J.
2014; 12 (11)
- **The minimal cadherin-catenin complex binds to actin filaments under force** *SCIENCE*
Buckley, C. D., Tan, J., Anderson, K. L., Hanein, D., Volkman, N., Weis, W. I., Nelson, W. J., Dunn, A. R.
2014; 346 (6209): 600-?
- **Structural and thermodynamic characterization of cadherin- β -catenin- α -catenin complex formation.** *journal of biological chemistry*
Pokutta, S., Choi, H., Ahlsen, G., Hansen, S. D., Weis, W. I.
2014; 289 (19): 13589-13601
- **Structural and Thermodynamic Characterization of Cadherin center dot beta-Catenin center dot alpha-Catenin Complex Formation** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Pokutta, S., Choi, H., Ahlsen, G., Hansen, S. D., Weis, W. I.
2014; 289 (19): 13589-13601
- **Molecular functions of the TLE tetramerization domain in Wnt target gene repression.** *EMBO journal*
Chodaparambil, J. V., Pate, K. T., Hepler, M. R., Tsai, B. P., Muthurajan, U. M., Luger, K., Waterman, M. L., Weis, W. I.
2014; 33 (7): 719-731
- **Drugging a Stem Cell Compartment Using Wnt3a Protein as a Therapeutic** *PLOS ONE*
Dhamdhere, G. R., Fang, M. Y., Jiang, J., Lee, K., Cheng, D., Olveda, R. C., Liu, B., Mulligan, K. A., Carlson, J. C., Ransom, R. C., Weis, W. I., Helms, J. A.
2014; 9 (1)
- **Structural basis of GSK-3 inhibition by N-terminal phosphorylation and by the Wnt receptor LRP6.** *eLife*
Stamos, J. L., Chu, M. L., Enos, M. D., Shah, N., Weis, W. I.
2014; 3
- **Modified T4 Lysozyme Fusion Proteins Facilitate G Protein-Coupled Receptor Crystallogenesis.** *Structure (London, England : 1993)*
Thorsen, T. S., Matt, R., Weis, W. I., Kobilka, B. K.
2014; 22 (11): 1657-64
- **Crystal structure reveals conservation of amyloid- β conformation recognized by 3D6 following humanization to bapineuzumab.** *Alzheimer's research & therapy*
Feinberg, H., Saldanha, J. W., Diep, L., Goel, A., Widom, A., Veldman, G. M., Weis, W. I., Schenk, D., Basu, G. S.
2014; 6 (3): 31-?
- **Common Polymorphisms in Human Langerin Change Specificity for Glycan Ligands** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Feinberg, H., Rowntree, T. J., Tan, S. L., Drickamer, K., Weis, W. I., Taylor, M. E.
2013; 288 (52): 36762-36771
- **Activation and allosteric modulation of a muscarinic acetylcholine receptor** *NATURE*
Kruse, A. C., Ring, A. M., Manglik, A., Hu, J., Hu, K., Eitel, K., Huebner, H., Pardon, E., Valant, C., Sexton, P. M., Christopoulos, A., Felder, C. C., Gmeiner, et al
2013; 504 (7478): 101-?
- **alpha E-catenin actin-binding domain alters actin filament conformation and regulates binding of nucleation and disassembly factors** *MOLECULAR BIOLOGY OF THE CELL*
Hansen, S. D., Kwiatkowski, A. V., Ouyang, C., Liu, H., Pokutta, S., Watkins, S. C., Volkman, N., Hanein, D., Weis, W. I., Mullins, R. D., Nelson, W. J.
2013; 24 (23): 3710-3720
- **Evolution and Cell Physiology. 3. Using Dictyostelium discoideum to investigate mechanisms of epithelial polarity** *AMERICAN JOURNAL OF PHYSIOLOGY-CELL PHYSIOLOGY*
Weis, W. I., Nelson, W. J., Dickinson, D. J.
2013; 305 (11): C1091-C1095
- **Applications of molecular replacement to G protein-coupled receptors** *ACTA CRYSTALLOGRAPHICA SECTION D-BIOLOGICAL CRYSTALLOGRAPHY*
Kruse, A. C., Manglik, A., Kobilka, B. K., Weis, W. I.
2013; 69: 2287-2292

- **Adrenaline-activated structure of β 2-adrenoceptor stabilized by an engineered nanobody.** *Nature*
Ring, A. M., Manglik, A., Kruse, A. C., Enos, M. D., Weis, W. I., Garcia, K. C., Kobilka, B. K.
2013; 502 (7472): 575-579
- **Mechanism for recognition of an unusual mycobacterial glycolipid by the macrophage receptor mincle.** *Journal of biological chemistry*
Feinberg, H., Jégouzo, S. A., Rowntree, T. J., Guan, Y., Brash, M. A., Taylor, M. E., Weis, W. I., Drickamer, K.
2013; 288 (40): 28457-28465
- **Danio rerio alpha E-catenin Is a Monomeric F-actin Binding Protein with Distinct Properties from Mus musculus alpha E-catenin** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Miller, P. W., Pokutta, S., Ghosh, A., Almo, S. C., Weis, W. I., Nelson, W. J., Kwiatkowski, A. V.
2013; 288 (31): 22324-22332
- **Syntaxin1a variants lacking an N-peptide or bearing the LE mutation bind to Munc18a in a closed conformation** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Colbert, K. N., Hattendorf, D. A., Weiss, T. M., Burkhardt, P., Fasshauer, D., Weis, W. I.
2013; 110 (31): 12637-12642
- **Structural Studies of Wnts and Identification of an LRP6 Binding Site** *STRUCTURE*
Chu, M. L., Ahn, V. E., Choi, H., Daniels, D. L., Nusse, R., Weis, W. I.
2013; 21 (7): 1235-1242
- **Structure of active β -arrestin-1 bound to a G-protein-coupled receptor phosphopeptide.** *Nature*
Shukla, A. K., Manglik, A., Kruse, A. C., Xiao, K., Reis, R. I., Tseng, W., Staus, D. P., Hilger, D., Uysal, S., Huang, L., Paduch, M., Tripathi-Shukla, P., Koide, et al
2013; 497 (7447): 137-141
- **Characterization of the Biophysical Origins of Mechanical Homeostasis at Cellular Adhesions** *57th Annual Meeting of the Biophysical-Society*
Mekhdjian, A. H., Morimatsu, M., Borghi, N., Pruitt, B. L., Weis, W. I., Nelson, W. J., Dunn, A. R.
CELL PRESS.2013: 491A-491A
- **Roles of cadherins and catenins in cell-cell adhesion and epithelial cell polarity.** *Progress in molecular biology and translational science*
Nelson, W. J., Dickinson, D. J., Weis, W. I.
2013; 116: 3-23
- **Danio rerio #E-catenin is a Monomeric F-actin Binding Protein With Distinct Properties from Mus musculus #E-catenin.** *The Journal of biological chemistry*
Miller, P. W., Pokutta, S., Ghosh, A., Almo, S. C., Weis, W. I., Nelson, W. J., Kwiatkowski, A. V.
2013
- **The evolutionary origin of epithelial cell-cell adhesion mechanisms.** *Current topics in membranes*
Miller, P. W., Clarke, D. N., Weis, W. I., Lowe, C. J., Nelson, W. J.
2013; 72: 267-311
- **The beta-Catenin Destruction Complex** *COLD SPRING HARBOR PERSPECTIVES IN BIOLOGY*
Stamos, J. L., Weis, W. I.
2013; 5 (1)
- **High-resolution crystal structure of human protease-activated receptor 1** *NATURE*
Zhang, C., Srinivasan, Y., Arlow, D. H., Fung, J. J., Palmer, D., Zheng, Y., Green, H. F., Pandey, A., Dror, R. O., Shaw, D. E., Weis, W. I., Coughlin, S. R., Kobilka, et al
2012; 492 (7429): 387-?
- **N-Terminal T4 Lysozyme Fusion Facilitates Crystallization of a G Protein Coupled Receptor** *PLOS ONE*
Zou, Y., Weis, W. I., Kobilka, B. K.
2012; 7 (10)
- **An epithelial tissue in Dictyostelium challenges the traditional origin of metazoan multicellularity** *BIOESSAYS*
Dickinson, D. J., Nelson, W. J., Weis, W. I.
2012; 34 (10): 833-840

- **alpha-Catenin and IQGAP Regulate Myosin Localization to Control Epithelial Tube Morphogenesis in Dictyostelium** *DEVELOPMENTAL CELL*
Dickinson, D. J., Robinson, D. N., Nelson, W. J., Weis, W. I.
2012; 23 (3): 533-546
- **E-cadherin is under constitutive actomyosin-generated tension that is increased at cell-cell contacts upon externally applied stretch** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Borghi, N., Sorokina, M., Shcherbakova, O. G., Weis, W. I., Pruitt, B. L., Nelson, W. J., Dunn, A. R.
2012; 109 (31): 12568-12573
- **alpha E-catenin is an autoinhibited molecule that coactivates vinculin** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Choi, H., Pokutta, S., Cadwell, G. W., Bobkov, A. A., Bankston, L. A., Liddington, R. C., Weis, W. I.
2012; 109 (22): 8576-8581
- **Structure of the delta-opioid receptor bound to naltrindole** *NATURE*
Granier, S., Manglik, A., Kruse, A. C., Kobilka, T. S., Thian, F. S., Weis, W. I., Kobilka, B. K.
2012; 485 (7398): 400-U171
- **Crystal structure of the mu-opioid receptor bound to a morphinan antagonist** *NATURE*
Manglik, A., Kruse, A. C., Kobilka, T. S., Thian, F. S., Mathiesen, J. M., Sunahara, R. K., Pardo, L., Weis, W. I., Kobilka, B. K., Granier, S.
2012; 485 (7398): 321-U170
- **Structure and dynamics of the M3 muscarinic acetylcholine receptor** *NATURE*
Kruse, A. C., Hu, J., Pan, A. C., Arlow, D. H., Rosenbaum, D. M., Rosemond, E., Green, H. F., Liu, T., Chae, P. S., Dror, R. O., Shaw, D. E., Weis, W. I., Wess, et al
2012; 482 (7386): 552-556
- **Structure of the human M2 muscarinic acetylcholine receptor bound to an antagonist** *NATURE*
Haga, K., Kruse, A. C., Asada, H., Yurugi-Kobayashi, T., Shiroishi, M., Zhang, C., Weis, W. I., Okada, T., Kobilka, B. K., Haga, T., Kobayashi, T.
2012; 482 (7386): 547-U147
- **Structural Basis of Wnt Signaling Inhibition by Dickkopf Binding to LRP5/6** *DEVELOPMENTAL CELL*
Ahn, V. E., Chu, M. L., Choi, H., Tran, D., Abo, A., Weis, W. I.
2011; 21 (5): 862-873
- **The beta-Catenin Binding Protein ICAT Modulates Androgen Receptor Activity** *MOLECULAR ENDOCRINOLOGY*
Zhuo, M., Zhu, C., Sun, J., Weis, W. I., Sun, Z.
2011; 25 (10): 1677-1688
- **Crystal structure of the beta(2) adrenergic receptor-Gs protein complex** *NATURE*
Rasmussen, S. G., DeVree, B. T., Zou, Y., Kruse, A. C., Chung, K. Y., Kobilka, T. S., Thian, F. S., Chae, P. S., Pardon, E., Calinski, D., Mathiesen, J. M., Shah, S. T., Lyons, et al
2011; 477 (7366): 549-U311
- **Protein Evolution in Cell and Tissue Development: Going Beyond Sequence and Transcriptional Analysis** *DEVELOPMENTAL CELL*
Dickinson, D. J., Weis, W. I., Nelson, W. J.
2011; 21 (1): 32-34
- **Crystal Structure of a Rigid Four-Spectrin-Repeat Fragment of the Human Desmoplakin Plakin Domain** *JOURNAL OF MOLECULAR BIOLOGY*
Choi, H., Weis, W. I.
2011; 409 (5): 800-812
- **A Polarized Epithelium Organized by beta- and alpha-Catenin Predates Cadherin and Metazoan Origins** *SCIENCE*
Dickinson, D. J., Nelson, W. J., Weis, W. I.
2011; 331 (6022): 1336-1339
- **Structural Basis for Langerin Recognition of Diverse Pathogen and Mammalian Glycans through a Single Binding Site** *JOURNAL OF MOLECULAR BIOLOGY*
Feinberg, H., Taylor, M. E., Razi, N., McBride, R., Knirel, Y. A., Graham, S. A., Drickamer, K., Weis, W. I.
2011; 405 (4): 1027-1039

- **Biochemical and Structural Characterization of beta-Catenin Interactions with Nonphosphorylated and CK2-Phosphorylated Lef-1** *JOURNAL OF MOLECULAR BIOLOGY*
Sun, J., Weis, W. I.
2011; 405 (2): 519-530
- **Structure of a nanobody-stabilized active state of the beta(2) adrenoceptor** *NATURE*
Rasmussen, S. G., Choi, H., Fung, J. J., Pardon, E., Casarosa, P., Chae, P. S., DeVree, B. T., Rosenbaum, D. M., Thian, F. S., Kobilka, T. S., Schnapp, A., Konetzki, I., Sunahara, et al
2011; 469 (7329): 175-180
- **Structure and function of an irreversible agonist-beta(2) adrenoceptor complex** *NATURE*
Rosenbaum, D. M., Zhang, C., Lyons, J. A., Holl, R., Aragao, D., Arlow, D. H., Rasmussen, S. G., Choi, H., DeVree, B. T., Sunahara, R. K., Chae, P. S., Gellman, S. H., Dror, et al
2011; 469 (7329): 236-240
- **In vitro and in vivo reconstitution of the cadherin-catenin-actin complex from Caenorhabditis elegans** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Kwiatkowski, A. V., Maiden, S. L., Pokutta, S., Choi, H., Benjamin, J. M., Lynch, A. M., Nelson, W. J., Weis, W. I., Hardin, J.
2010; 107 (33): 14591-14596
- **Direct Ubiquitination of beta-Catenin by Siah-1 and Regulation by the Exchange Factor TBL1** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Dimitrova, Y. N., Li, J., Lee, Y., Rios-Esteves, J., Friedman, D. B., Choi, H., Weis, W. I., Wang, C., Chazin, W. J.
2010; 285 (18): 13507-13516
- **Trimeric Structure of Langerin** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Feinberg, H., Powlesland, A. S., Taylor, M. E., Weis, W. I.
2010; 285 (17): 13285-13293
- **alpha E-catenin regulates actin dynamics independently of cadherin-mediated cell-cell adhesion** *JOURNAL OF CELL BIOLOGY*
Benjamin, J. M., Kwiatkowski, A. V., Yang, C., Korobova, F., Pokutta, S., Svitkina, T., Weis, W. I., Nelson, W. J.
2010; 189 (2): 339-352
- **Structural Correlates of Antibodies Associated with Acute Reversal of Amyloid beta-related Behavioral Deficits in a Mouse Model of Alzheimer Disease** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Basi, G. S., Feinberg, H., Oshidari, F., Anderson, J., Barbour, R., Baker, J., Comery, T. A., Diep, L., Gill, D., Johnson-Wood, K., Goel, A., Grantcharova, K., Lee, et al
2010; 285 (5): 3417-3427
- **Ligand-specific regulation of the extracellular surface of a G-protein-coupled receptor** *NATURE*
Bokoch, M. P., Zou, Y., Rasmussen, S. G., Liu, C. W., Nygaard, R., Rosenbaum, D. M., Fung, J. J., Choi, H., Thian, F. S., Kobilka, T. S., Puglisi, J. D., Weis, W. I., Pardo, et al
2010; 463 (7277): 108-U121
- **Segmented Helical Structure of the Neck Region of the Glycan-Binding Receptor DC-SIGNR** *JOURNAL OF MOLECULAR BIOLOGY*
Feinberg, H., Tso, C. K., Taylor, M. E., Drickamer, K., Weis, W. I.
2009; 394 (4): 613-620
- **Interactions of Plakoglobin and beta-Catenin with Desmosomal Cadherins BASIS OF SELECTIVE EXCLUSION OF alpha-AND beta-CATENIN FROM DESMOSOMES** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Choi, H., Gross, J. C., Pokutta, S., Weis, W. I.
2009; 284 (46): 31776-31788
- **Structure and Biochemistry of Cadherins and Catenins** *COLD SPRING HARBOR PERSPECTIVES IN BIOLOGY*
Shapiro, L., Weis, W. I.
2009; 1 (3)
- **The First Propeller Domain of LRP6 Regulates Sensitivity to DKK1** *MOLECULAR BIOLOGY OF THE CELL*
Binnerts, M. E., Tomasevic, N., Bright, J. M., Leung, J., Ahn, V. E., Kim, K., Zhan, X., Liu, S., Yonkovich, S., Williams, J., Zhou, M., Gros, D., Dixon, et al
2009; 20 (15): 3552-3560

- **CRYSTAL STRUCTURES OF THE beta(2)-ADRENERGIC RECEPTOR** *40th Erice Course on From Molecules to Medicine - Structure of Biological Macromolecules and Its Relevance in Combating New Diseases and Bioterrorism*
Weis, W. I., Rosenbaum, D. M., Rasmussen, S. G., Choi, H., Thian, F. S., Kobilka, T. S., Yao, X., Day, P. W., Parnot, C., Fung, J. J., Ratnala, V. R., Kobilka, B. K., Cherezov, et al
SPRINGER.2009: 217-230
- **Direct Inhibition of GSK3 beta by the Phosphorylated Cytoplasmic Domain of LRP6 in Wnt/beta-Catenin Signaling** *PLOS ONE*
Piao, S., Lee, S., Kim, H., Yum, S., Stamos, J. L., Xu, Y., Lee, S., Lee, J., Oh, S., Han, J., Park, B., Weis, W. I., Ha, et al
2008; 3 (12)
- **Structural insights into G-protein-coupled receptor activation** *CURRENT OPINION IN STRUCTURAL BIOLOGY*
Weis, W. I., Kobilka, B. K.
2008; 18 (6): 734-740
- **Improved structures of full-length p97, an AAA ATPase: Implications for mechanisms of nucleotide-dependent conformational change** *STRUCTURE*
Davies, J. M., Brunger, A. T., Weis, W. I.
2008; 16 (5): 715-726
- **Munc18a controls SNARE assembly through its interaction with the syntaxin N-peptid** *EMBO JOURNAL*
Burkhardt, P., Hattendorf, D. A., Weis, W. I., Fasshauer, D.
2008; 27 (7): 923-933
- **Biochemical and structural analysis of alpha-catenin in cell-cell contacts** *BIOCHEMICAL SOCIETY TRANSACTIONS*
Pokutta, S., Drees, F., Yamada, S., Nelson, W. J., Weis, W. I.
2008; 36: 141-147
- **GPCR engineering yields high-resolution structural insights into beta(2)-adrenergic receptor function** *SCIENCE*
Rosenbaum, D. M., Cherezov, V., Hanson, M. A., Rasmussen, S. G., Thian, F. S., Kobilka, T. S., Choi, H., Yao, X., Weis, W. I., Stevens, R. C., Kobilka, B. K.
2007; 318 (5854): 1266-1273
- **High-resolution crystal structure of an engineered human beta(2)-adrenergic G protein-coupled receptor** *SCIENCE*
Cherezov, V., Rosenbaum, D. M., Hanson, M. A., Rasmussen, S. G., Thian, F. S., Kobilka, T. S., Choi, H., Kuhn, P., Weis, W. I., Kobilka, B. K., Stevens, R. C.
2007; 318 (5854): 1258-1265
- **Crystal structure of the human beta(2) adrenergic G-protein-coupled receptor** *NATURE*
Rasmussen, S. G., Choi, H., Rosenbaum, D. M., Kobilka, T. S., Thian, F. S., Edwards, P. C., Burghammer, M., Ratnala, V. R., Sanishvili, R., Fischetti, R. F., Schertler, G. F., Weis, W. I., Kobilka, et al
2007; 450 (7168): 383-U4
- **A monoclonal antibody for G protein-coupled receptor crystallography** *NATURE METHODS*
Day, P. W., Rasmussen, S. G., Parnot, C., Fung, J. J., Masood, A., Kobilka, T. S., Yao, X., Choi, H., Weis, W. I., Rohrer, D. K., Kobilka, B. K.
2007; 4 (11): 927-929
- **Catenins: playing both sides of the synapse** *CURRENT OPINION IN CELL BIOLOGY*
Kwiatkowski, A. V., Weis, W. I., Nelson, W. J.
2007; 19 (5): 551-556
- **Scavenger receptor C-type lectin binds to the leukocyte cell surface glycan Lewis(x) by a novel mechanism** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Feinberg, H., Taylor, M. E., Weis, W. I.
2007; 282 (23): 17250-17258
- **Structure of the yeast polarity protein Sro7 reveals a SNARE regulatory mechanism** *NATURE*
Hattendorf, D. A., Andreeva, A., Gangar, A., Brennwald, P. J., Weis, W. I.
2007; 446 (7135): 567-571
- **Multiple modes of binding enhance the affinity of DC-SIGN for high mannose N-linked glycans found on viral glycoproteins** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Feinberg, H., Castelli, R., Drickamer, K., Seeberger, P. H., Weis, W. I.
2007; 282 (6): 4202-4209

- **Structure and mechanism of Cadherins and catenins in cell-cell contacts** *ANNUAL REVIEW OF CELL AND DEVELOPMENTAL BIOLOGY*
Pokutta, S., Weis, W. I.
2007; 23: 237-261
- **Re-solving the cadherin-catenin-actin conundrum** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Weis, W. I., Nelson, W. J.
2006; 281 (47): 35593-35597
- **Crystal structure of the S-cerevisiae exocyst component Exo70p** *JOURNAL OF MOLECULAR BIOLOGY*
Hamburger, Z. A., Hamburger, A. E., West, A. P., Weis, W. I.
2006; 356 (1): 9-21
- **Thermodynamics of beta-catenin-ligand interactions - The roles of the N- and C-terminal tails in modulating binding affinity** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Choi, H. J., Huber, A. H., Weis, W. I.
2006; 281 (2): 1027-1038
- **Deconstructing the cadherin-catenin-actin complex** *CELL*
Yamada, S., Pokutta, S., Drees, F., Weis, W. I., Nelson, W. J.
2005; 123 (5): 889-901
- **alpha-catenin is a molecular switch that binds E-cadherin-beta-catenin and regulates actin-filament assembly** *CELL*
Drees, F., Pokutta, S., Yamada, S., Nelson, W. J., Weis, W. I.
2005; 123 (5): 903-915
- **Structural basis of DC-SIGN ligand specificity** *Annual Meeting of the Society-for-Glycobiology*
Feinberg, H., Guo, Y., Conroy, E., Mitchell, D., Alvarez, R., Blixt, O., Taylor, M., Drickamer, K., Weis, W.
OXFORD UNIV PRESS INC.2005: 1195-95
- **beta-catenin directly displaces Groucho/TLE repressors from Tcf/Lef in Wnt-mediated transcription activation** *NATURE STRUCTURAL & MOLECULAR BIOLOGY*
Daniels, D. L., Weis, W. I.
2005; 12 (4): 364-371
- **Structure of the armadillo repeat domain of plakophilin 1** *JOURNAL OF MOLECULAR BIOLOGY*
Choi, H. J., Weis, W. I.
2005; 346 (1): 367-376
- **Conformational changes of p97 during nucleotide hydrolysis determined by small-angle X-ray scattering** *STRUCTURE*
Davies, J. M., Tsuruta, H., May, A. P., Weis, W. I.
2005; 13 (2): 183-195
- **Extended neck regions stabilize tetramers of the receptors DC-SIGN and DC-SIGNR** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Feinberg, H., Guo, Y., Mitchell, D. A., Drickamer, K., Weis, W. I.
2005; 280 (2): 1327-1335
- **Mechanism of phosphorylation-dependent binding of APC to beta-catenin and its role in beta-catenin degradation** *MOLECULAR CELL*
Ha, N. C., Tonzuka, T., Stamos, J. L., Choi, H. J., Weis, W. I.
2004; 15 (4): 511-521
- **Structural basis for distinct ligand-binding and targeting properties of the receptors DC-SIGN and DC-SIGNR** *NATURE STRUCTURAL & MOLECULAR BIOLOGY*
Guo, Y., Feinberg, H., Conroy, E., Mitchell, D. A., Alvarez, R., Blixt, O., Taylor, M. E., Weis, W. I., Drickamer, K.
2004; 11 (7): 591-598
- **In vitro methods for investigating desmoplakin-intermediate filament interactions and their role in adhesive strength** *INTERMEDIATE FILAMENT CYTOSKELETON*
Hudson, T. Y., Fontao, L., Godsel, L. M., Choi, H. J., Huen, A. C., Borradori, L., Weis, W. I., Green, K. J.
2004; 78: 757-786

- **Structural aspects of adherens junctions and desmosomes.** *Handbook of experimental pharmacology*
Choi, H., Weis, W. I.
2004; 23-52
- **Crystal structure of the CUB1-EGF-CUB2 region of mannose-binding protein associated serine protease-2** *EMBO JOURNAL*
Feinberg, H., Uitdehaag, J. C., Davies, J. M., Wallis, R., Drickamer, K., Weis, W. I.
2003; 22 (10): 2348-2359
- **A structural analysis of full length VCP, a AAA protein.** *47th Annual Meeting of the Biophysical-Society*
DeLaBarre, B., Rouiller, I., May, A. P., Weis, W. I., Wilson-Kubalek, E. M., Brunger, A. T.
CELL PRESS.2003: 356A-356A
- **Conformational changes of the multifunction p97 AAA ATPase during its ATPase cycle** *NATURE STRUCTURAL BIOLOGY*
Rouiller, I., DeLaBarre, B., May, A. P., Weis, W. I., Brunger, A. T., Milligan, R. A., Wilson-Kubalek, E. M.
2002; 9 (12): 950-957
- **ICAT inhibits beta-catenin binding to Tcf/Lef-family transcription factors and the general coactivator p300 using independent structural modules** *MOLECULAR CELL*
Daniels, D. L., Weis, W. I.
2002; 10 (3): 573-584
- **Structures of two intermediate filament-binding fragments of desmoplakin reveal a unique repeat motif structure** *NATURE STRUCTURAL BIOLOGY*
Choi, H. J., Park-Snyder, S., Pascoe, L. T., Green, K. J., Weis, W. I.
2002; 9 (8): 612-620
- **Three-dimensional structure of the amino-terminal domain of syntaxin 6, a SNAP-25 C homolog** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Misura, K. M., Bock, J. B., Gonzalez, L. C., Scheller, R. H., Weis, W. I.
2002; 99 (14): 9184-9189
- **Biochemical and structural definition of the 1-afadin- and actin-binding sites of alpha-catenin** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Pokutta, S., Drees, F., Takai, Y., NELSON, W. J., Weis, W. I.
2002; 277 (21): 18868-18874
- **Orientation of bound ligands in mannose-binding proteins - Implications for multivalent ligand recognition** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Ng, K. K., Kolatkar, A. R., Park-Snyder, S., Feinberg, H., Clark, D. A., Drickamer, K., Weis, W. I.
2002; 277 (18): 16088-16095
- **The cytoplasmic face of cell contact sites** *CURRENT OPINION IN STRUCTURAL BIOLOGY*
Pokutta, S., Weis, W. I.
2002; 12 (2): 255-262
- **Structural basis for selective recognition of oligosaccharides by DC-SIGN and DC-SIGNR** *SCIENCE*
Feinberg, H., Mitchell, D. A., Drickamer, K., Weis, W. I.
2001; 294 (5549): 2163-2166
- **Molecular mechanisms of beta-catenin recognition by adenomatous polyposis coli revealed by the structure of an APC-beta-catenin complex** *EMBO JOURNAL*
Spink, K. E., Fridman, S. G., Weis, W. I.
2001; 20 (22): 6203-6212
- **Crystal structure and biophysical properties of a complex between the N-terminal SNARE region of SNAP25 and syntaxin 1a.** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Misura, K. M., Gonzalez, L. C., May, A. P., Scheller, R. H., Weis, W. I.
2001; 276 (44): 41301-41309
- **beta-catenin: molecular plasticity and drug design** *TRENDS IN BIOCHEMICAL SCIENCES*
Daniels, D. L., Spink, K. E., Weis, W. I.
2001; 26 (11): 672-678

- **A novel SNARE N-terminal domain revealed by the crystal structure of Sec22b** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Gonzalez, L. C., Weis, W. I., Scheller, R. H.
2001; 276 (26): 24203-24211
- **Unraveling the mechanism of the vesicle transport ATPase NSF, the N-ethylmaleimide-sensitive factor** *JOURNAL OF BIOLOGICAL CHEMISTRY*
May, A. P., Whiteheart, S. W., Weis, W. I.
2001; 276 (25): 21991-21994
- **The structure of the beta-catenin/E-cadherin complex and the molecular basis of diverse ligand recognition by beta-catenin** *CELL*
Huber, A. H., Weis, W. I.
2001; 105 (3): 391-402
- **Self-association of the H3 region of syntaxin 1A - Implications for intermediates in snare complex assembly** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Misura, K. M., Scheller, R. H., Weis, W. I.
2001; 276 (16): 13273-13282
- **The cadherin cytoplasmic domain is unstructured in the absence of beta-catenin - A possible-mechanism for regulating cadherin turnover** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Huber, A. H., STEWART, D. B., Laurents, D. V., NELSON, W. J., Weis, W. I.
2001; 276 (15): 12301-12309
- **Protein-protein interactions in intracellular membrane fusion** *CURRENT OPINION IN STRUCTURAL BIOLOGY*
Misura, K. M., May, A. P., Weis, W. I.
2000; 10 (6): 662-671
- **Mechanism of pH-dependent N-acetylgalactosamine binding by a functional mimic of the hepatocyte asialoglycoprotein receptor** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Feinberg, H., Torgersen, D., Drickamer, K., Weis, W. I.
2000; 275 (45): 35176-35184
- **Structure of a C-type carbohydrate recognition domain from the macrophage mannose receptor** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Feinberg, H., Park-Snyder, S., Kolatkar, A. R., Heise, C. T., Taylor, M. E., Weis, W. I.
2000; 275 (28): 21539-21548
- **Structural basis of the Axin-adenomatous polyposis coli interaction** *EMBO JOURNAL*
Spink, K. E., Polakis, P., Weis, W. I.
2000; 19 (10): 2270-2279
- **Three-dimensional structure of the neuronal-Sec1-syntaxin 1a complex** *NATURE*
Misura, K. M., Scheller, R. H., Weis, W. I.
2000; 404 (6776): 355-362
- **Structure of the dimerization and beta-catenin-binding region of alpha-catenin** *MOLECULAR CELL*
Pokutta, S., Weis, W. I.
2000; 5 (3): 533-543
- **Crystal structure of the amino-terminal domain of N-ethylmaleimide-sensitive fusion protein** *NATURE CELL BIOLOGY*
May, A. P., Misura, K. M., Whiteheart, S. W., Weis, W. I.
1999; 1 (3): 175-182
- **Ca²⁺-dependent structural changes in C-type mannose-binding proteins** *BIOCHEMISTRY*
Ng, K. K., Park-Snyder, S., Weis, W. I.
1998; 37 (51): 17965-17976
- **Coupling of prolyl peptide bond isomerization and Ca²⁺ binding in a C-type mannose-binding protein** *BIOCHEMISTRY*
Ng, K. K., Weis, W. I.
1998; 37 (51): 17977-17989
- **Crystal structure of the hexamerization domain of N-ethylmaleimide-sensitive fusion protein** *CELL*
Lenzen, C. U., Steinmann, D., Whiteheart, S. W., Weis, W. I.

1998; 94 (4): 525-536

- **Mechanism of N-acetylgalactosamine binding to a C-type animal lectin carbohydrate-recognition domain** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Kolatkar, A. R., Leung, A. K., Isecke, R., Brossmer, R., Drickamer, K., Weis, W. I.
1998; 273 (31): 19502-19508
- **The C-type lectin superfamily in the immune system** *IMMUNOLOGICAL REVIEWS*
Weis, W. I., Taylor, M. E., Drickamer, K.
1998; 163: 19-34
- **Cell-surface carbohydrate recognition by animal and viral lectins** *CURRENT OPINION IN STRUCTURAL BIOLOGY*
Weis, W. I.
1997; 7 (5): 624-630
- **Three-dimensional structure of the armadillo repeat region of beta-catenin** *CELL*
Huber, A. H., NELSON, W. J., Weis, W. I.
1997; 90 (5): 871-882
- **Structure of a selectin-like mutant of mannose-binding protein complexed with sialylated and sulfated Lewis(x) oligosaccharides** *BIOCHEMISTRY*
Ng, K. K., Weis, W. I.
1997; 36 (5): 979-988
- **Structural basis of galactose recognition by C-type animal lectins** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Kolatkar, A. R., Weis, W. I.
1996; 271 (12): 6679-6685
- **Structural analysis of monosaccharide recognition by rat liver mannose-binding protein** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Ng, K. K., Drickamer, K., Weis, W. I.
1996; 271 (2): 663-674
- **Direct observation of protein solvation and discrete disorder with experimental crystallographic phases** *SCIENCE*
Burling, F. T., Weis, W. I., Flaherty, K. M., Brunger, A. T.
1996; 271 (5245): 72-77
- **Structural basis of lectin-carbohydrate recognition** *ANNUAL REVIEW OF BIOCHEMISTRY*
Weis, W. I., Drickamer, K.
1996; 65: 441-473
- **TRIMERIC STRUCTURE OF A C-TYPE MANNOSE-BINDING PROTEIN** *STRUCTURE*
Weis, W. I., Drickamer, K.
1994; 2 (12): 1227-1240
- **BINDING OF SUGAR LIGANDS TO CA²⁺-DEPENDENT ANIMAL LECTINS .1. ANALYSIS OF MANNOSE-BINDING BY SITE-DIRECTED MUTAGENESIS AND NMR** *JOURNAL OF BIOLOGICAL CHEMISTRY*
IOBST, S. T., Wormald, M. R., Weis, W. I., Dwek, R. A., Drickamer, K.
1994; 269 (22): 15505-15511
- **RECOGNITION OF CELL-SURFACE CARBOHYDRATES BY C-TYPE ANIMAL LECTINS** *SmithKline-Beecham-Pharmaceuticals 7th US Research Symposium - Cellular Adhesion: Molecular Definition to Therapeutic Potential*
Weis, W. I.
PLENUM PRESS DIV PLENUM PUBLISHING CORP.1994: 55-75
- **STRUCTURE OF A C-TYPE MANNOSE-BINDING PROTEIN COMPLEXED WITH AN OLIGOSACCHARIDE** *NATURE*
Weis, W. I., Drickamer, K., Hendrickson, W. A.
1992; 360 (6400): 127-134
- **MOLECULAR MECHANISMS OF COMPLEX CARBOHYDRATE-RECOGNITION AT THE CELL-SURFACE** *COLD SPRING HARBOR SYMPOSIA ON QUANTITATIVE BIOLOGY*
Weis, W. I., Quesenberry, M. S., Taylor, M. E., Bezouska, K., Hendrickson, W. A., Drickamer, K.
1992; 57: 281-289

- **STRUCTURE OF THE CALCIUM-DEPENDENT LECTIN DOMAIN FROM A RAT MANNANOSE-BINDING PROTEIN DETERMINED BY MAD PHASING** *SCIENCE*
Weis, W. I., Kahn, R., Fourme, R., Drickamer, K., Hendrickson, W. A.
1991; 254 (5038): 1608-1615
- **PHYSICAL CHARACTERIZATION AND CRYSTALLIZATION OF THE CARBOHYDRATE-RECOGNITION DOMAIN OF A MANNANOSE-BINDING PROTEIN FROM RAT** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Weis, W. I., Crichlow, G. V., Murthy, H. M., Hendrickson, W. A., Drickamer, K.
1991; 266 (31): 20678-20686
- **RIGID PROTEIN MOTION AS A MODEL FOR CRYSTALLOGRAPHIC TEMPERATURE FACTORS** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Kuriyan, J., Weis, W. I.
1991; 88 (7): 2773-2777
- **REFINEMENT OF THE INFLUENZA-VIRUS HEMAGGLUTININ BY SIMULATED ANNEALING** *JOURNAL OF MOLECULAR BIOLOGY*
Weis, W. I., Brunger, A. T., Skehel, J. J., WILEY, D. C.
1990; 212 (4): 737-761
- **THE STRUCTURE OF A MEMBRANE-FUSION MUTANT OF THE INFLUENZA-VIRUS HEMAGGLUTININ** *EMBO JOURNAL*
Weis, W. I., CUSACK, S. C., Brown, J. H., Daniels, R. S., Skehel, J. J., WILEY, D. C.
1990; 9 (1): 17-24
- **MEMBRANE-FUSION BY INFLUENZA-VIRUSES AND THE MECHANISM OF ACTION OF AMANTADINE** *INTERNATIONAL WORKSHOP ON THE USE OF X-RAY CRYSTALLOGRAPHY IN THE DESIGN OF ANTIVIRAL AGENTS*
Wharton, S. A., Hay, A. J., Sugrue, R. J., Skehel, J. J., Weis, W. I., WILEY, D. C.
ACADEMIC PRESS INC.1990: 1-12
- **IMMUNE RECOGNITION OF INFLUENZA-VIRUS HEMAGGLUTININ** *PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY OF LONDON SERIES B-BIOLOGICAL SCIENCES*
Skehel, J. J., BARNET, B. C., Burt, D. S., Daniels, R. S., Douglas, A. R., Graham, C. M., Hodgson, J., Knossow, M., Mills, K. H., Riska, P. F., Thomas, D. B., Weis, W., WILEY, et al
1989; 323 (1217): 479-?
- **STUDIES ON THE STRUCTURE OF THE INFLUENZA-VIRUS HEMAGGLUTININ AT THE PH OF MEMBRANE-FUSION** *JOURNAL OF GENERAL VIROLOGY*
Ruigrok, R. W., Aitken, A., Calder, L. J., Martin, S. R., Skehel, J. J., Wharton, S. A., Weis, W., WILEY, D. C.
1988; 69: 2785-2795
- **STRUCTURE OF THE INFLUENZA-VIRUS HEMAGGLUTININ COMPLEXED WITH ITS RECEPTOR, SIALIC-ACID** *NATURE*
Weis, W., Brown, J. H., Cusack, S., Paulson, J. C., Skehel, J. J., WILEY, D. C.
1988; 333 (6172): 426-431
- **CONFORMATIONAL ASPECTS OF THE ACID-INDUCED FUSION MECHANISM OF INFLUENZA-VIRUS HEMAGGLUTININ - CIRCULAR-DICHROISM AND FLUORESCENCE STUDIES** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Wharton, S. A., Ruigrok, R. W., Martin, S. R., Skehel, J. J., Bayley, P. M., Weis, W., WILEY, D. C.
1988; 263 (9): 4474-4480