

## References 2

### Links: Abstracts, Articles, etc.

These links should work as of 2014; sometimes you have to click on them several times; if they don't work, then Google/search the titles

**Collagen, AA Transport, Thyroid/Cholinergic, Tyrosine, Tyramine, Theophylline, MOA's, Glutamate, NMDA, TKI's, PL-C, Mg, Lemon Balm/Theanine, mitochondria, BCAA's, peroxidases, adenosine, tendon ruptures due to endocrinopathies, FQ's, TOPO's, Other**

<http://link.springer.com/article/10.1007%2FBF00965468#page-1> Mechanism of action of collagenase on the permeability of the blood-brain barrier

<http://en.wikipedia.org/wiki/Collagenase> Collagenase

<http://en.wikipedia.org/wiki/MMP1> MMP1 Collagenase

[http://en.wikipedia.org/wiki/Matrix\\_metalloproteinase](http://en.wikipedia.org/wiki/Matrix_metalloproteinase) Matrix metalloproteinase

<http://www.ncbi.nlm.nih.gov/books/NBK21582/> Collagen: The Fibrous Proteins of the Matrix

<http://www.ncbi.nlm.nih.gov/pubmed/11101304?dopt=Abstract> Interaction of collagen-like peptide models of asymmetric acetylcholinesterase with glycosaminoglycans: spectroscopic studies of conformational changes and stability

<http://www.ncbi.nlm.nih.gov/pubmed/12128074> Collagen fibril size and crimp morphology in ruptured and intact Achilles tendons.

<http://www.ncbi.nlm.nih.gov/pubmed/15475213> Collagen fibres of the spontaneously ruptured human tendons display decreased thickness and crimp angle.

<http://www.ncbi.nlm.nih.gov/pubmed/2725420> Alterations in dry mass content of collagen fibers in degenerative tendinopathy and tendon-rupture.

[http://en.wikipedia.org/wiki/Collagen\\_receptor](http://en.wikipedia.org/wiki/Collagen_receptor) Collagen receptor

[http://www.cell.com/molecular-cell/abstract/S1097-2765\(00\)80003-9](http://www.cell.com/molecular-cell/abstract/S1097-2765(00)80003-9) The Discoidin Domain Receptor Tyrosine Kinases Are Activated by Collagen

<http://www.jbc.org/content/288/11/7430.full> Discoidin Domain Receptors: Unique Receptor Tyrosine Kinases in Collagen-mediated Signaling “The discoidin domain receptors (DDR) are receptor tyrosine kinases that recognize collagens as their ligands”

<http://www.ncbi.nlm.nih.gov/pubmed/23791804> Bidirectional binding property of high glycine-tyrosine keratin-associated protein contributes to the mechanical strength and shape of hair.

<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0013538> Characterization of In Vivo Keratin 19 Phosphorylation on Tyrosine-391

<http://www.ncbi.nlm.nih.gov/pubmed/24079591> Drug-related nail disease.(TKI's)

<http://www.ncbi.nlm.nih.gov/pubmed/24821006> Thyroid dysfunctions induced by tyrosine kinase inhibitors

<http://www.sciencemag.org/content/245/4913/63.abstract> Human diabetes associated with a deletion of the tyrosine kinase domain of the insulin receptor

<http://quizlet.com/23043526/disorders-of-catecholamine-tyrosine-cysteine-metabolism-flash-cards/> Disorders of catecholamine, tyrosine, cysteine metabolism

<http://books.google.com/books?id=MbBc5p17nMOC&pg=PA408&lpg=PA408&dq=tyrosine+transporters&source=bl&ots=PqCRdhsrHi&sig=X142LEpyRsEFNTtoJLE4ETSrYw7E&hl=en&sa=X&ei=PDkeVJL4JNCdygSytlHoDQ&ved=0CEEQ6AEwBjgK#v=onepage&q=tyrosine%20transporters&f=false> Metabolic Encephalopathy

<http://www.ncbi.nlm.nih.gov/pubmed/10391915> Identification of a membrane protein, LAT-2, that Co-expresses with 4F2 heavy chain, an L-type amino acid transport activity with broad specificity for small and large zwitterionic amino acids (and bulky analogs)

<http://www.ncbi.nlm.nih.gov/pubmed/8554532> The 4F2hc surface antigen is necessary for expression of system L-like neutral amino acid-transport activity in C6-BU-1 rat glioma cells: evidence from expression studies in Xenopus laevis oocytes.

<http://www.ncbi.nlm.nih.gov/pubmed/16461116?dopt=Abstract&holding=ngp> Non-neuronal cholinergic system in human bladder urothelium.

<http://www.ncbi.nlm.nih.gov/pubmed/20655720> Vitamin D3 restores altered cholinergic and insulin receptor expression in the cerebral cortex and muscarinic M3 receptor expression in pancreatic islets of streptozotocin induced diabetic rats.

<http://www.ncbi.nlm.nih.gov/pubmed/6251103> Presence and influence of cholinergic nerves in the human thyroid. (Cholinergic innervations effect was blocked by atropine, a muscarinic receptor antagonist)

<http://www.ncbi.nlm.nih.gov/pubmed/737727> Cholinergic nerves in the thyroid gland. “The present results suggest that the endocrine activity of the thyroid gland is also under the control of the autonomic nervous system.”

<http://www.ncbi.nlm.nih.gov/pubmed/2996533> Effects of acetylcholine, TSH and other stimulators on intracellular calcium concentration in dog thyroid cells.

<http://connection.ebscohost.com/c/articles/11135018/acetylcholinesterase-mechanism-catalysis-inhibition> Acetylcholinesterase: Mechanism of Catalysis and Inhibition

<http://www.sciencedirect.com/science/article/pii/S0006899302024654> Effects of estrogen on acetylcholine release in frontal cortex of female rats: involvement of serotonergic neuronal systems

[http://www.ajemjournal.com/article/S0735-6757\(07\)00087-3/fulltext](http://www.ajemjournal.com/article/S0735-6757(07)00087-3/fulltext) **Thyroid storm precipitated by organophosphate intoxication** (Organophosphate (OP) pesticides inhibit the function of acetylcholinesterase and cause an excess of acetylcholine in synapses and neuromuscular junctions, resulting in muscarinic and nicotinic effects; both could cause secretion by the thyroid gland)

<http://www.sciencedirect.com/science/article/pii/S030372079090147Z> **Acetylcholine stimulates cortisol secretion through the M3 muscarinic receptor linked to a polyphosphoinositide-specific phospholipase C in bovine adrenal fasciculata/reticularis cells**

<http://www.ncbi.nlm.nih.gov/pubmed/8161343> The M3 muscarinic receptor mediates acetylcholine-induced cortisol secretion from bovine adrenocortical zona fasciculata/reticularis cells

<http://www.gdatf.org/about/about-graves-disease/patient-education/me-bush-and-graves-disease/> **Me, Bush and Graves' Disease** (good article describes the emotional roller coaster of having Grave's antibodies; note tall thin phenotype, energetic type person with nervous energy; note onset of author's "Grave's" was "flu like with sore throat – SAT with transient thyrotoxicosis → eventual hypo, which might have also been transient, [although she had TED which thankfully went away])

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC369841/> Identification of Phosphotyrosine-Containing Proteins in Untransformed and Rous Sarcoma Virus-Transformed Chicken Embryo Fibroblasts

<http://nar.oxfordjournals.org/content/31/3/805.full> Conservation of structure and function among tyrosine recombinases: homology-based modeling of the lambda integrase core-binding domain

<http://www.ncbi.nlm.nih.gov/pubmed/6433810> Effect of theophylline on the transport of tyrosine in cultured B-16 mouse melanoma cells. “These results suggested that biosynthesis of macromolecules, probably acting as System L transporter, was induced by theophylline treatment.”

<http://www.ncbi.nlm.nih.gov/pubmed/4398014> Induction of tyrosine aminotransferase in rat liver by epinephrine and theophylline.

<http://www.ncbi.nlm.nih.gov/pubmed/4156976> Circadian chronotypic induction of tyrosine aminotransferase and depletion of glycogen by theophylline in the rat.

<http://www.sciencedirect.com/science/article/pii/0304416574903043> The effects of theophylline and certain other purine derivatives on tyrosine aminotransferase activity in hepatoma cells in culture

<http://cancerres.aacrjournals.org/content/31/11/1580.full.pdf> Induction of Tyrosine Aminotransferase and Amino Acid Transport in Morris Hepatomas and in Adult and Neonatal Rat Liver

<http://books.google.com/books?id=R0W1ErpsQpkC&pg=PA1244&lpg=PA1244&dq=tyrosine+theophylline&source=bl&ots=oCMI3YZss&sig=L6-DOoe021CY4V7rh6gwI6MZAn0&hl=en&sa=X&ei=PhsfVOKWHsSqyASSnoDABA&ved=0CB0Q6AEwADgK#v=onepage&q=tyrosine%20theophylline&f=false> Methylxanthine and Tyrosine binding

<https://sciencescape.org/paper/6137488> Possible involvement of cGMP in the control of tyrosine aminotransferase degradation in rat hepatocytes

<http://insysbio.ru/sites/default/files/2010%20poster%20Theophylline.pdf> Theophylline as HDAC – specific antioxidant: Hypothetical mechanism of anti-inflammatory effects in chronic obstructive pulmonary disease

<http://www.ncbi.nlm.nih.gov/pubmed/12887140> Effects of tyrosine, phentermine, caffeine D-amphetamine, and placebo on cognitive and motor performance deficits during sleep deprivation

<http://www.ncbi.nlm.nih.gov/pubmed/12887139> A comparison of tyrosine against placebo, phentermine, caffeine, and D-amphetamine during sleep deprivation

<http://www.ncbi.nlm.nih.gov/pubmed/20578900> **Drugs affecting thyroid function**  
[gbarbesino@partners.org](mailto:gbarbesino@partners.org)

<http://www.ncbi.nlm.nih.gov/pubmed/8154511> **Effects of commonly prescribed nonsteroidal anti-inflammatory drugs on thyroid hormone measurements**

<http://www.ncbi.nlm.nih.gov/pubmed/8579720> Autoantibodies to glutamic acid decarboxylase in patients with autoimmune thyroid disease: relation to competitive insulin autoantibodies. "These data demonstrate that GAD antibodies in sera of AITD patients are of low titer but significantly elevated compared to healthy controls . . . "

<http://link.springer.com/article/10.1007/BF00784721> Changes in thyroid function produced by glutamic acid under normal and anoxic conditions

<http://www.thyroidmanager.org/wp-content/uploads/2011/06/5-1.jpg> Pathways of Thyroid Hormone Metabolism

<http://www.thyroidmanager.org/wp-content/uploads/2011/06/2-1.png> Thyroid Hormones

[https://classconnection.s3.amazonaws.com/94/flashcards/1500094/jpg/action\\_of\\_thyroid\\_hormones1335848630736.jpg](https://classconnection.s3.amazonaws.com/94/flashcards/1500094/jpg/action_of_thyroid_hormones1335848630736.jpg) Action of Thyroid Hormones

<http://crisivilad.com/blog/wp-content/uploads/2014/07/Thyroid-Hormone-Levels-and-Very-Low-Carb-ketogenic-Nutrition-T3-and-T4-formation.jpg> Thyroid Hormones

[http://www.mdpi.com/ijms/ijms-14-13873/article\\_deploy/html/images/ijms-14-13873f1-1024.png](http://www.mdpi.com/ijms/ijms-14-13873/article_deploy/html/images/ijms-14-13873f1-1024.png)  
Thyroid Hormones

[http://www.intechopen.com/source/html/37924/media/image2\\_w.jpg](http://www.intechopen.com/source/html/37924/media/image2_w.jpg) Thyroid Hormones

[http://upload.wikimedia.org/wikipedia/commons/8/82/Thyroid\\_hormone\\_synthesis.png](http://upload.wikimedia.org/wikipedia/commons/8/82/Thyroid_hormone_synthesis.png) Thyroid Hormones

<http://www.cell.com/cms/attachment/2018543935/2038695894/gr1.jpg> Thyroid Hormones

<http://arbl.cvmb.colostate.edu/hbooks/pathphys/endocrine/thyroid/receptors.html> Thyroid Hormone Receptors (nice description of TRE's – I would consider mutations here a possibility)

[http://en.wikipedia.org/wiki/Pregnane\\_X\\_receptor](http://en.wikipedia.org/wiki/Pregnane_X_receptor) Pregnane X receptor. “In the field of molecular biology, the pregnane X receptor (PXR), also known as the steroid and xenobiotic sensing nuclear receptor (SXR) or nuclear receptor subfamily 1 . . . Like other type II nuclear receptors, when activated, it forms a heterodimer with the retinoid X receptor, and binds to hormone response elements on DNA which elicits expression of gene products . . . binding to the response element of the CYP3A4 promoter as a heterodimer with the 9-cis retinoic acid receptor RXR. It is activated by a range of compounds that induce CYP3A4, including dexamethasone (antibiotics/xenobiotics).

[http://www.biology-online.org/user\\_files/Image/Biochemistry/BC-nuclear%20receptors.gif](http://www.biology-online.org/user_files/Image/Biochemistry/BC-nuclear%20receptors.gif) Nuclear Receptor Superfamily (includes steroids, TH, FA's, and xenobiotics)

<http://www.thyroidmanager.org/chapter/adult-hypothyroidism/> Adult Hypothyroidism

<http://www.dl.begellhouse.com/journals/2ff21abf44b19838,3dde19f3158ddb3b,5cb61c2401bcaa57.html> Autoimmunity against Thyroid Hormones (Yes – I really wish this would be tested for and researched more)

<http://annals.org/article.aspx?articleid=699989> Autoantibodies Against Thyroid Hormones or Iodothyronine: Implications in Diagnosis, Thyroid Function, Treatment, and Pathogenesis (same as above)

<http://europemc.org/abstract/MED/3582264> Thyroid hormone autoantibodies (THAA) in two cases of Graves' disease: effects of antithyroid drugs, prednisolone, and subtotal thyroidectomy “These results indicate that methimazole treatment could induce and/or enhance the production of THAA and THAA

are antibodies against thyroid hormone-containing Tg molecule” (what about other inhibitors, like possible FQ’s?)

[http://www.unboundmedicine.com/medline/citation/10698290/Effect\\_of\\_thyroid\\_hormone\\_on\\_the\\_myosin\\_heavy\\_chain\\_isoforms\\_in\\_slow\\_and\\_fast\\_muscles\\_of\\_the\\_rat](http://www.unboundmedicine.com/medline/citation/10698290/Effect_of_thyroid_hormone_on_the_myosin_heavy_chain_isoforms_in_slow_and_fast_muscles_of_the_rat) Effect of thyroid hormone on the myosin heavy chain isoforms in slow and fast muscles of the rat

[http://www1.montpellier.inra.fr/umr-dcc/travaux\\_GB.htm](http://www1.montpellier.inra.fr/umr-dcc/travaux_GB.htm) Molecular basis of the triiodothyronine myogenic influence, IDENTIFICATION AND PHYSIOLOGICAL IMPORTANCE OF THE DIRECT T3 MITOCHONDRIAL PATHWAY

<http://www.ncbi.nlm.nih.gov/pubmed/22452346> Mitochondrial F(0) F(1) -ATP synthase is a molecular target of 3-iodothyronamine, an endogenous metabolite of thyroid hormone.

<http://www.ncbi.nlm.nih.gov/pubmed/3417847> Drug and fatty acid effects on serum thyroid hormone binding.

<http://www.ncbi.nlm.nih.gov/pubmed/8256209> Thyroid-stimulating hormone activates phospholipase C in normal and neoplastic thyroid tissue

<http://abstracts.iovs.org/cgi/content/abstract/46/5/4408> Tyrosine Kinases and Tyrosine Phosphatases in Lacrimal Gland Intracellular Signaling

<http://www.ncbi.nlm.nih.gov/pubmed/25070042> Pituitary side effects of old and new drugs.

[http://www.fasebj.org/cgi/content/meeting\\_abstract/20/5/A1287-b](http://www.fasebj.org/cgi/content/meeting_abstract/20/5/A1287-b) Protein kinase C and calcium activate p42/p44 MAPK in lacrimal gland using non-receptor tyrosine kinases

<http://www.ncbi.nlm.nih.gov/pubmed/16514173> Sodium-iodide symporter mediates iodide secretion in rat gastric mucosa in vitro

<http://www.ncbi.nlm.nih.gov/pubmed/17214887> Expression of the Na<sup>+</sup>/I<sup>-</sup> symporter (NIS) is markedly decreased or absent in gastric cancer and intestinal metaplastic mucosa of Barrett esophagus

<http://www.nature.com/nsmb/journal/v19/n12/full/nsmb.2423.html> Structural basis for recognition of 5'-phosphotyrosine adducts by Tdp2

[http://www.nature.com/nsmb/journal/v19/n12/fig\\_tab/nsmb.2455\\_F1.html](http://www.nature.com/nsmb/journal/v19/n12/fig_tab/nsmb.2455_F1.html) Figure 1: Model for Tdp2-dependent repair of Top2-induced DNA DSBs

<http://www.ncbi.nlm.nih.gov/pubmed/16365091> Lessons from genetic disorders of branched-chain amino acid metabolism

<http://www.ncbi.nlm.nih.gov/pubmed/16143519> The design and synthesis of human branched-chain amino acid aminotransferase inhibitors for treatment of neurodegenerative diseases

<http://www.ncbi.nlm.nih.gov/pubmed/22654736> Expression of mitochondrial branched-chain aminotransferase and  $\alpha$ -keto-acid dehydrogenase in rat brain: implications for neurotransmitter metabolism

<http://www.ncbi.nlm.nih.gov/pubmed/19793885> LRT, a tendon-specific leucine-rich repeat protein, promotes muscle-tendon targeting through its interaction with Robo

<http://www.ncbi.nlm.nih.gov/books/NBK1319/> Maple Syrup Urine Disease

<http://nursinglink.monster.com/training/articles/320-clinically-significant-drug-interaction-with-the-cytochrome-p450-enzyme-system> Clinically Significant Drug Interaction with the Cytochrome P450 Enzyme System

<http://www.cholinergicurticaria.net/thyroid-hypothyroid-or-hormone-imbalance-cause-cholinergic-urticaria-hives/> Thyroid, Hypothyroid, Or Hormone Imbalance Cause Cholinergic Urticaria Hives?

<http://www.hindawi.com/journals/crie/2013/792745/> Iodine-Induced Hyperthyroidism—An Old Clinical Entity That Is Still Relevant to Daily ICU Practice: A Case Report. (Note Cipro as one of Abx, although pt had multinodular goiter as well)

<http://www.cfmedicine.com/history/topics/endocrine.htm> Thyroid Function, Iodide Therapy

<https://www.youtube.com/watch?v=P1Fjuook3S8> The Iodine-Dopamine-Parkinson's Disease connection

<http://onlinelibrary.wiley.com/enhanced/doi/10.1111/j.1744-1633.2011.00547.x/> Topical application of povidone-iodine before wound closure is associated with significant increase in serum iodine level

<http://www.ncbi.nlm.nih.gov/pubmed/21461567> Intracellular iodinated compounds affect sodium iodide symporter expression through TSH-mediated signaling pathways

<http://www.ncbi.nlm.nih.gov/pubmed/8767511> Thyroid hormone deiodinases--a selenoenzyme family acting as gate keepers to thyroid hormone action

<http://www.ncbi.nlm.nih.gov/pubmed/24049667> Lactoperoxidase: structural insights into the function, ligand binding and inhibition (LPO and MPO as antigenic targets for TPO?)

<http://www.ncbi.nlm.nih.gov/pubmed/9133057> Use of bovine myeloperoxidase as an indicator of mastitis in dairy cattle (MPO is in dairy products)

<http://www.ncbi.nlm.nih.gov/pubmed/16288970> Active site structure and catalytic mechanisms of human peroxidases

<http://www.ncbi.nlm.nih.gov/pubmed/11080366> Molecular evolution of the myeloperoxidase family

<http://www.ncbi.nlm.nih.gov/pubmed/2840655> Human myeloperoxidase and thyroid peroxidase, two enzymes with separate and distinct physiological functions, are evolutionarily related members of the same gene family

<http://drknews.com/when-hashimotos-is-misdiagnosed-as-bipolar-disorder/> When Hashimoto's is misdiagnosed as bipolar disorder: A patient's story

[http://en.wikipedia.org/wiki/Phospholipase\\_C](http://en.wikipedia.org/wiki/Phospholipase_C) Phospholipase C. "Receptors that activate this pathway are mainly G protein-coupled receptors coupled to the Gαq subunit, including: 5-HT<sub>2</sub> serotonergic receptors, α<sub>1</sub> (Alpha-1) adrenergic receptors, Calcitonin receptors, H<sub>1</sub> histamine receptors, Metabotropic glutamate receptors, Group I, M<sub>1</sub>, M<sub>3</sub>, and M<sub>5</sub> muscarinic receptors, Thyroid-Releasing Hormone receptor in anterior pituitary gland."

[http://en.wikipedia.org/wiki/Glycogen\\_storage\\_disease](http://en.wikipedia.org/wiki/Glycogen_storage_disease) Glycogen Storage Disease (enzyme deficiencies)

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2738414/?report=classic> Hypertensive Crisis and Cheese

[http://en.wikipedia.org/wiki/Monoamine\\_oxidase](http://en.wikipedia.org/wiki/Monoamine_oxidase) Monoamine oxidase

[http://en.wikipedia.org/wiki/Monoamine\\_oxidase\\_inhibitor](http://en.wikipedia.org/wiki/Monoamine_oxidase_inhibitor) Monoamine oxidase inhibitor

<http://en.wikipedia.org/wiki/Tryptamine> Tryptamine

<http://www.ncbi.nlm.nih.gov/pubmed/14560923> Inhibitory effect of trans-N-p-coumaroyl tryamine from the twigs of *Celtis chinensis* on the acetylcholinesterase

<http://pubchem.ncbi.nlm.nih.gov/compound/5610?from=summary> Tyramine Info

[http://en.wikipedia.org/wiki/Tyrosine\\_decarboxylase](http://en.wikipedia.org/wiki/Tyrosine_decarboxylase) Tyrosine decarboxylase

<http://www.medhelp.org/posts/Allergies---Food/Tyramine-intolerance---hidden-allergy/show/1235498> Tyramine sensitivity stories

<http://www.sciencedaily.com/releases/2007/10/071001125645.htm> Tyramine tests in foods (need a serum/platelets tyramine test, but I could not find a single lab anywhere in the US that tests for this in patients)

[http://en.wikipedia.org/wiki/Adrenergic\\_storm](http://en.wikipedia.org/wiki/Adrenergic_storm) Adrenergic storm (MAOi's, Tyramine) ". . . but as there are no serotonin receptors in the heart or blood vessels there are no direct effects on the heart. Thus, the presence of arrhythmia, abnormal echocardiograms, or chest pain indicates an adrenergic crisis and rules out serotonin syndrome).

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2738414/> Hypertensive Crisis and Cheese

<http://www.genome.jp/kegg/pathway/map/map00350.html> KEGG Pathway Tyrosine Metabolism

<https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-2007-1004856> Monoamine Oxidase A Mediates Iodotyrosine Formation Induced by Monoamines in Bovine Thyroid Particulate Fraction “Monoamines are able to increase the thyroid iodine organification in vitro” (consider genetic abnormality in MOA’s and tyramine issues as underlying Hashi’s)

<http://www.ncbi.nlm.nih.gov/pubmed/25143606> Distinct roles of bulbar muscarinic and nicotinic receptors in olfactory discrimination learning (Dry sinuses, phantom smells a part of some FQ victims, suspect cholinergic component)

<http://www.ncbi.nlm.nih.gov/pubmed/1799095> Involvement of the olfactory system in learning and memory: a close correlation between the olfactory deficit and the course of Alzheimer's disease?

<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0045544> Profound Olfactory Dysfunction in Myasthenia Gravis

<http://www.ncbi.nlm.nih.gov/pubmed/11408989> Relief of fibromyalgia symptoms following discontinuation of dietary excitotoxins

[http://en.wikipedia.org/wiki/Glutamate\\_flavoring](http://en.wikipedia.org/wiki/Glutamate_flavoring) Glutamate flavoring

[http://en.wikipedia.org/wiki/Glutamate\\_receptor](http://en.wikipedia.org/wiki/Glutamate_receptor) Glutamate receptor

<http://www.ncbi.nlm.nih.gov/pubmed/7246043> Histological changes in the thyroid gland induced by monosodium glutamate in mice

<http://www.ncbi.nlm.nih.gov/pubmed/18543341> Thyroid hormone increases astrocytic glutamate uptake and protects astrocytes and neurons against glutamate toxicity

<http://www.sciencedirect.com/science/article/pii/S0304394012014425> Anti-glutamate receptor  $\epsilon 2$  antibodies in psychiatric patients with anti-thyroid autoantibodies – A prevalence study in Japan (antibodies to glutamic acid = gluten, thyroid studies and pt stories show that gluten sensitivities in thyroid AITD; 60% or more flox victims sensitive to glutamate foods as well)

<http://www.ncbi.nlm.nih.gov/pubmed/19352315> Does celiac disease trigger autoimmune thyroiditis?

<http://www.ncbi.nlm.nih.gov/pubmed/19014325> Tissue transglutaminase antibodies in individuals with celiac disease bind to thyroid follicles and extracellular matrix and may contribute to thyroid dysfunction

[http://www.eurekalert.org/pub\\_releases/2009-10/f-sf-rae100909.php](http://www.eurekalert.org/pub_releases/2009-10/f-sf-rae100909.php) Receptor activated exclusively by glutamate discovered on tongue (When I had my “Kombu” crisis, the question of was it iodine or glutamate or both occurred, and the severe electrical rxn in my head, face, and tongue)

<http://nutritionfacts.org/2012/07/05/do-eden-beans-have-too-much-iodine/> Do Eden Beans Have Too Much Iodine?

[http://www.edenfoods.com/articles/view.php?articles\\_id=207](http://www.edenfoods.com/articles/view.php?articles_id=207) Glutamic Acid - It Is Not MSG or Monosodium Glutamate

<http://www.ncbi.nlm.nih.gov/pubmed/15048893> Glutamate receptor antagonists protect from virus-induced neural degeneration

<http://www.ncbi.nlm.nih.gov/pubmed/9130796> Feline immunodeficiency virus causes increased glutamate levels and neuronal loss in brain

<http://www.sciencedirect.com/science/article/pii/S004268229990079X> Replication Rate of Feline Immunodeficiency Virus in Astrocytes Is Envelope Dependent: Implications for Glutamate Uptake

<http://www.whale.to/b/blaylock.html> How Vaccines Can Damage Your Brain: Vaccines, Depression and Neurodegeneration After Age 50: Another Reason to Avoid the Recommended Vaccines (glutamate,depression, inflammation)

<https://www.alshopefoundation.org/understanding-als/causes-of-als.php> Causes of ALS “There is evidence of increased glutamate in ALS patients and in ALS mice and this in turn may be responsible for nerve cell death. The increased glutamate may result from either abnormal transport of glutamate out of the nerve cell environment or increased release of glutamate from nerve cells. To date, there is some evidence that the transporter responsible for removing glutamate from the nervous system may be altered and/or the process for making the transport protein damaged”.

<http://www.ncbi.nlm.nih.gov/pubmed/20980684> The effects of estrogen and progesterone on blood glutamate levels: evidence from changes of blood glutamate levels during the menstrual cycle in women

<http://www.sciencedirect.com/science/article/pii/S0304394096127609> Estrogen protects primary cortical neurons from glutamate toxicity

<http://neurosci.umn.edu/biblio/estrogen-receptors-stimulate-brain-region-specific-metabotropic-glutamate-receptors-rapidly> Estrogen receptors stimulate brain region specific metabotropic glutamate receptors to rapidly initiate signal transduction pathways

<http://www.ncbi.nlm.nih.gov/pubmed/15585999> Skeletal muscle glutamate metabolism in health and disease: state of the art

[http://www.oarsijournal.com/article/S1063-4584\(09\)00033-8/abstract](http://www.oarsijournal.com/article/S1063-4584(09)00033-8/abstract) Glutamate signaling in chondrocytes and the potential involvement of NMDA receptors in cell proliferation and inflammatory gene expression

<http://www.ncbi.nlm.nih.gov/pubmed/16086032> Abolition of chondral mineralization by group III metabotropic glutamate receptors expressed in rodent cartilage

<http://211.144.68.84:9998/91keshi/Public/File/8/16-12/pdf/1-s2.0-S1063458408001258-main.pdf> Increase in excitatory amino acid concentration and transporters expression in osteoarthritic knees of anterior cruciate ligament transected rabbits

[http://www.oarsijournal.com/article/S1063-4584\(13\)00593-1/abstract](http://www.oarsijournal.com/article/S1063-4584(13)00593-1/abstract) Glutamate is elevated in pathologic posterior tibial tendons of patients with posterior tibial tendon dysfunction

[http://www.bjproc.boneandjoint.org.uk/content/90-B/SUPP\\_II/365.1](http://www.bjproc.boneandjoint.org.uk/content/90-B/SUPP_II/365.1) OC16 FUNCTIONAL IONOTROPIC GLUTAMATE RECEPTORS IN HUMAN FIBROBLAST-LIKE SYNOVIOCYTES MODULATE IL-6 AND MMP-2 EXPRESSION

<http://ard.bmj.com/content/early/2013/10/15/annrheumdis-2013-203670.full.pdf> AMPA/kainate glutamate receptors contribute to inflammation, degeneration and pain related behaviour in inflammatory stages of arthritis

[http://en.wikipedia.org/wiki/NMDA\\_receptor\\_antagonist](http://en.wikipedia.org/wiki/NMDA_receptor_antagonist) NMDA receptor antagonist

<http://www.pnas.org/content/98/11/5947.full> Glutamate antagonists: Deadly liaisons with cancer

[http://www.tinnitusjournal.com/detalhe\\_artigo.asp?id=294](http://www.tinnitusjournal.com/detalhe_artigo.asp?id=294) Glutamate Antagonists, Steroids, and Antioxidants as Therapeutic Options for Hearing Loss and Tinnitus and the Use of an Inner Ear Drug Delivery System

<http://www.ncbi.nlm.nih.gov/pubmed/22355971> Magnesium, a drug of diverse use

[http://www.jle.com/fr/revues/mrh/e-docs/magnesium\\_in\\_drug\\_dependences\\_277374/article.phtml](http://www.jle.com/fr/revues/mrh/e-docs/magnesium_in_drug_dependences_277374/article.phtml) Magnesium in drug dependences

[http://www.lef.org/magazine/2007/8/report\\_stress\\_anxiety/Page-01](http://www.lef.org/magazine/2007/8/report_stress_anxiety/Page-01) Lemon Balm and Theanine: Quick Relief from Anxiety and Stress Without Tranquilizer Drugs

<http://www.lifeextensionretail.com/MagazineArticleDetail.aspx?article=118844> Lemon Balm and Theanine: Natural Stress and Anxiety Relief

<http://www.ncbi.nlm.nih.gov/pubmed/21477654> Neuroprotective effects of theanine and its preventive effects on cognitive dysfunction.

<http://www.ncbi.nlm.nih.gov/pubmed/17182482> The neuropharmacology of L-theanine(N-ethyl-L-glutamine): a possible neuroprotective and cognitive enhancing agent.

<http://ghr.nlm.nih.gov/condition/sialidosis> Sialidosis

<http://www.ncbi.nlm.nih.gov/pubmed/11337249> Comparative enzymology, biochemistry and pathophysiology of human exo-alpha-sialidases (neuraminidases).

[http://www.umdf.org/site/c.8qKOJ0MvF7LUG/b.7940911/k.555F/Inheritance\\_Genetics.htm](http://www.umdf.org/site/c.8qKOJ0MvF7LUG/b.7940911/k.555F/Inheritance_Genetics.htm) Mitochondrial Inheritance and Genetics

<http://care.diabetesjournals.org/content/35/8/1749> Circulating Metabolite Predictors of Glycemia in Middle-Aged Men and Women

<http://www.hindawi.com/journals/jtr/2011/152850/> Why Can Insulin Resistance Be a Natural Consequence of Thyroid Dysfunction?

<http://press.endocrine.org/doi/full/10.1210/jc.2006-0841> Thyroid Function Is Intrinsically Linked to Insulin Sensitivity and Endothelium-Dependent Vasodilation in Healthy Euthyroid Subjects

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3063335/> A Twin Approach to Unraveling Epigenetics (good paper)

<http://en.wikipedia.org/wiki/Porphyrin> Porphyrin (note list of drugs which can cause or exacerbate this)

<http://www.porphyrifoundation.com/testing-and-treatment/testing-for-porphyrin/tests-for-porphyrin-diagnosis> Tests for Porphyrin diagnosis

<http://en.wikipedia.org/wiki/Phosphodiesterase> Phosphodiesterase

<http://www.ncbi.nlm.nih.gov/pubmed/7435179> The influence of a local injection of cortisol on the mechanical properties of tendons and ligaments and the indirect effect on skin

<http://www.ncbi.nlm.nih.gov/pubmed/7112037> Long term local cortisol treatment of tendons and the indirect effect on skin. An experimental study in rats

<http://www.ncbi.nlm.nih.gov/pubmed/18774551> Spontaneous rupture of Achilles tendon and Cushing's disease. Case report

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1116439/> Spontaneous rupture of Achilles tendon: missed presentation of Cushing's syndrome

<http://www.ncbi.nlm.nih.gov/pubmed/17701152> Successive ruptures of patellar and Achilles tendons. Anabolic steroids in competitive sports.

<http://www.ncbi.nlm.nih.gov/pubmed/8808545> Spontaneous rupture of the anterior cruciate ligament after anabolic steroids

<http://www.ncbi.nlm.nih.gov/pubmed/3958557> Spontaneous rupture of the extensor pollicis longus tendon after anabolic steroids

<http://www.ncbi.nlm.nih.gov/pubmed/11051026> Pathological rupture of the distal biceps tendon after long-term androgen substitution.

[http://ojs.sagepub.com/content/1/4\\_suppl/2325967113S00085.abstract](http://ojs.sagepub.com/content/1/4_suppl/2325967113S00085.abstract) Could Low Total and Free Testosterone Levels be risk factor for Achilles Tendon Ruptures in Males

<http://www.ncbi.nlm.nih.gov/pubmed/18927264> Effect of estrogen on tendon collagen synthesis, tendon structural characteristics, and biomechanical

<http://www.ncbi.nlm.nih.gov/pubmed/18845777> Effect of administration of oral contraceptives in vivo on collagen synthesis in tendon and muscle connective tissue in young women

[http://www.bjjprocs.boneandjoint.org.uk/content/94-B/SUPP\\_XXIII/230.abstract](http://www.bjjprocs.boneandjoint.org.uk/content/94-B/SUPP_XXIII/230.abstract) ESTROGEN FLUCTUATIONS IN FEMALES INFLUENCE THE MECHANICAL BEHAVIOUR OF THE HUMAN ACHILLES TENDON IN VIVO

<http://www.newswise.com/articles/female-athletes-with-higher-estrogen-levels-may-have-higher-injury-risk> Female Athletes with Higher Estrogen Levels May Have Higher Injury Risk

[http://www.the-rheumatologist.org/details/article/867939/When\\_Steroids\\_Cause\\_Psychosis.html](http://www.the-rheumatologist.org/details/article/867939/When_Steroids_Cause_Psychosis.html)  
When Steroids Cause Psychosis: Medical management of this side effect is complicated in rheumatology patients. "Doses necessary to control disease are frequently high (e.g., 1 mg/kg or greater), and therapy may be maintained for prolonged periods of weeks to months. In this setting, one out of every two to three patients (that's 33-50%!!!!) prescribed steroids may develop psychiatric symptoms including psychosis, mania, delirium, and depression. The most common symptoms reported with corticosteroid therapy are hypomania, mania, and psychosis."

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2568887/> Adenosine receptors: therapeutic aspects for inflammatory and immune diseases

<http://pubs.acs.org/doi/abs/10.1021/jm00345a001> Adenosine receptors: targets for future drugs

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3930074/> Adenosine receptors as drug targets — what are the challenges?

<http://www.ncbi.nlm.nih.gov/pubmed/7810607> Thyroid hormones modulate both adenosine transport and adenosine A1 receptors in rat brain

<http://esciencecentral.org/journals/natural-health-products-as-modulators-of-adenosine-2329-6836.1000e109.php?aid=30670> Natural Health Products as Modulators of Adenosine and ATP Metabolism for Cardiovascular Protection

<http://www.ncbi.nlm.nih.gov/pubmed/21134357> Limonene, a natural cyclic terpene, is an agonistic ligand for adenosine A(2A) receptors

[http://en.wikipedia.org/wiki/Adenosine\\_reuptake\\_inhibitor](http://en.wikipedia.org/wiki/Adenosine_reuptake_inhibitor) Adenosine reuptake inhibitor

## FQ's, TOPO's

<http://quizlet.com/23640947/quinolone-antibiotic-flash-cards/> Quinolones

<http://www.pharmacologyweekly.com/articles/fluoroquinolone-antibiotic-seizures-epilepsy-CNS-ciprofloxacin-levofloxacin-moxifloxacin-gemifloxacin> FQ's and seizures mechanism

<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0039754> New Insights into Fluoroquinolone Resistance in Mycobacterium tuberculosis: Functional Genetic Analysis of gyrA and gyrB Mutations

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5707a2.htm> Emergence of Fluoroquinolone-Resistant Neisseria meningitidis --- Minnesota and North Dakota, 2007--2008

[http://www.drugbank.ca/search?utf8=%E2%9C%93&query=Ciprofloxacin&search\\_type=drugs&button=Ciprofloxacin](http://www.drugbank.ca/search?utf8=%E2%9C%93&query=Ciprofloxacin&search_type=drugs&button=Ciprofloxacin)

<http://www.fatsn.org/effect%20of%20ciprofloxacin%20on%20tendon,%20paratenon,%20and%20capsular%20fibroblast%20metabolism.pdf> FQ Adverse effects abstracts: tendons, glutamate, etc.

<http://www.ncbi.nlm.nih.gov/pubmed/10843129> The effect of ciprofloxacin on tendon, paratenon, and capsular fibroblast metabolism

[http://www.unboundmedicine.com/medline/citation/24102496/Monocarboxylate\\_transporter\\_mediated\\_uptake\\_of\\_moxifloxacin\\_on\\_human\\_retinal\\_pigmented\\_epithelium\\_cells](http://www.unboundmedicine.com/medline/citation/24102496/Monocarboxylate_transporter_mediated_uptake_of_moxifloxacin_on_human_retinal_pigmented_epithelium_cells) Monocarboxylate transporter mediated uptake of moxifloxacin on human retinal pigmented epithelium cells

<http://www.ncbi.nlm.nih.gov/pubmed/22435536> Fluoroquinolone disposition: identification of the contribution of renal secretory and reabsorptive drug transporters. (Due to their zwitterionic nature, FQs are likely to interact with organic anion and cation transporters within the solute carrier (SLC) superfamily, including OAT1, OAT3, OCT2, OCTN1, OCTN2, MATE1, and MATE2. The ATP-binding cassette (ABC) transporters MDR1, MRP2, MRP4, and BCRP also may interact with FQs.)

<http://www.jbc.org/content/270/25/14998.long> Topoisomerase II Binds to Ellipticine in the Absence or Presence of DNA. CHARACTERIZATION OF ENZYME-GRAPHIC DRUG INTERACTIONS BY FLUORESCENCE SPECTROSCOPY

<http://www.nature.com/nature/journal/v501/n7465/full/nature12504.html> Topoisomerases facilitate transcription of long genes linked to autism

<http://sfari.org/news-and-opinion/news/2013/autism-genes-are-surprisingly-large-study-finds> Autism genes are surprisingly large, study finds

[http://en.wikipedia.org/wiki/Topoisomerase\\_inhibitor](http://en.wikipedia.org/wiki/Topoisomerase_inhibitor) Topoisomerase inhibitor

<http://www.ncbi.nlm.nih.gov/pubmed/15035644> N-acetyl-p-benzoquinone imine, the toxic metabolite of acetaminophen, is a topoisomerase II poison

<http://www.ncbi.nlm.nih.gov/pubmed/23253398> Oxidative metabolites of curcumin poison human type II topoisomerases

[http://www.nytimes.com/2014/11/14/world/asia/tainted-drugs-suspected-in-india-sterilization-deaths.html?smid=fb-share&\\_r=2](http://www.nytimes.com/2014/11/14/world/asia/tainted-drugs-suspected-in-india-sterilization-deaths.html?smid=fb-share&_r=2) Post-Mortems of Victims Point to Tainted Medication in India Sterilization Deaths “ . . . investigation has focused on the two packets of pills sent home with each patient after surgery, one containing ciprofloxacin, an antibiotic, and the other containing the anti-inflammatory and painkiller ibuprofen . . . ”

<http://pubs.acs.org/doi/abs/10.1021/jf960215l> Binding of Fluoroquinolone Carboxylic Acid Derivatives to Clay Minerals

<http://www.ncbi.nlm.nih.gov/pubmed/7751748> Effect of ciprofloxacin on contractile responses of canine airway smooth muscle.

<http://aac.asm.org/content/45/10/2928.full#ref-13> Effects of New Quinolones on Transepithelial Electrical Potential Difference of Tracheal Mucosa In Vivo

<http://en.wikipedia.org/wiki/Piperidine> Piperidine – used as building blocks in pharmaceuticals

<http://en.wikipedia.org/wiki/Piperazine> Piperazine -- used in pharmaceuticals – “The neuromuscular effects are thought to be caused by blocking acetylcholine at the myoneural junction. This action is mediated by its agonist effects upon the inhibitory GABA ( $\gamma$ -aminobutyric acid) receptor”.

## Other

[http://en.wikipedia.org/wiki/DNA\\_repair](http://en.wikipedia.org/wiki/DNA_repair) DNA Repair

[http://en.wikipedia.org/wiki/Intercalation\\_\(biochemistry\)](http://en.wikipedia.org/wiki/Intercalation_(biochemistry)) Intercalation (FQ's intercalate when binding)

[http://www.nature.com/nrmicro/journal/v11/n8/fig\\_tab/nrmicro3067\\_F4.html](http://www.nature.com/nrmicro/journal/v11/n8/fig_tab/nrmicro3067_F4.html) Rolling hairpin replication of adeno-associated virus.

<http://www.livestrong.com/article/315227-low-iodine-high-protein-diet/> Low Iodine, High protein diet

[http://www.cc.nih.gov/ccc/patient\\_education/pepubs/lo\\_io\\_diet.pdf](http://www.cc.nih.gov/ccc/patient_education/pepubs/lo_io_diet.pdf) Low Iodine Diet

[http://www.cnelm.com/NutritionPractitioner/Issues/Issue\\_11\\_1/Articles/5%20WheyProtein-%20final.pdf](http://www.cnelm.com/NutritionPractitioner/Issues/Issue_11_1/Articles/5%20WheyProtein-%20final.pdf) Whey Protein Info

<http://www.ncbi.nlm.nih.gov/pubmed/23207804> The promiscuous binding of pharmaceutical drugs and their transporter-mediated uptake into cells: what we (need to) know and how we can do so

<http://www.ncbi.nlm.nih.gov/pubmed/18309312> Carrier-mediated cellular uptake of pharmaceutical drugs: an exception or the rule?

<http://www.ncbi.nlm.nih.gov/pubmed/20671764> Coexistence of passive and carrier-mediated processes in drug transport

<http://gps.biocuckoo.org/links.php> Computational resources of protein phosphorylation

[http://en.wikipedia.org/wiki/Aromatic\\_amino\\_acids](http://en.wikipedia.org/wiki/Aromatic_amino_acids) Aromatic amino acids

[http://www.momsacrossamerica.com/glyphosate\\_testing](http://www.momsacrossamerica.com/glyphosate_testing) Glyphosate Testing

[http://www.nbcnews.com/id/6291903/ns/technology\\_and\\_science-science/t/how-human-genome-transforming-medicine/#.VJhQNsAFDr9](http://www.nbcnews.com/id/6291903/ns/technology_and_science-science/t/how-human-genome-transforming-medicine/#.VJhQNsAFDr9) How the Human Genome is Transforming Medicine

<http://www.inchem.org/documents/jecfa/jecmono/v024je11.htm> Iodine – good info

<http://dogtorj.com/> Food intolerances in people and pets

<https://agenda.weforum.org/2014/10/genes-turned-on-off/> How genes are turned on and off

<http://www.dizziness-and-balance.com/treatment/drug/drugrx.html> Drug Treatment of Vertigo

<http://selfhacked.com/about/> Interesting website: “Accordingly, I don’t fit into any category: I’m not “paleo”, low carb, low fat or anything else for that matter. I do what works for me and I encourage people to do what works for them, but try out many approaches”.

<http://phys.org/news/2014-11-junk-rna-mimics-dna-restrains.html> No junk: Long RNA mimics DNA, restrains hormone responses

<http://www.lef.org/magazine/2013/6/The-Forgotten-Longevity-Benefits-of-Taurine/Page-01> The Forgotten Longevity Benefits of Taurine

<http://www.whatislife.com/reader2/Metabolism/pathway/amin> Amino acid metabolism

<http://themedicalbiochemistrypage.org/amino-acid-metabolism.php> Amino Acid Metabolism

<http://hormonerestoration.com/Cortisol.html> Cortisol Deficiency ("adrenal fatigue", "adrenal insufficiency")

<http://www.theculture.org/rich/sharpblue/archives/000200.html> Vertigo (Labrynthitis) forum comments

<http://medicalxpress.com/news/2014-12-enterovirus-infection-pancreatic-islets-patients.html> Detection of enterovirus infection in pancreatic islets in patients newly diagnosed with type 1 diabetes (possible viral cause of autoimmune – what do viral mechanisms have in common with toxic mechanisms in hormonal receptors/enzymes/signal transductions processes, etc).

<http://www.newyorker.com/magazine/2013/08/26/whats-wrong-with-me> Nice description of “Hashi Hell”

<http://scitechdaily.com/new-method-detecting-unwanted-dna-breaks-human-cells/> New Method for Detecting Unwanted DNA Breaks in Human Cells

<http://www.scientificamerican.com/article/the-dark-corners-of-our-dna-hold-clues-about-disease/> The Dark Corners of Our DNA Hold Clues about Disease

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2841398/> Variations in DNA elucidate molecular networks that cause disease

<http://medicalxpress.com/news/2014-12-scientists-uncover-fundamental-mechanism-resveratrol.html> Scientists uncover new, fundamental mechanism for how resveratrol provides health benefits. “. . . put TyrRS and resveratrol together and showed with tests including X-ray crystallography that resveratrol does indeed **mimic tyrosine**, well enough to fit tightly into TyrRS's tyrosine binding pocket . . . We think this is just the tip of the iceberg," said Schimmel. "We think there are a lot more **amino-acid mimics** out there that can have beneficial effects like this in people." (this is an excellent example of “promiscuous binding” – consider FQ’s mimicking Tyr or other aromatics in binding also –except with detrimental effects)

<http://faculty.clintoncc.suny.edu/faculty/michael.gregory/files/bio%20102/bio%20102%20lectures/endocrine%20system/endocrin.htm> Endocrine System

<http://www.snpedia.com/index.php/Rs6323> Rs6323 Monoamine Oxidase

<https://www.yahoo.com/style/birth-control-almost-ruined-my-relationship-104762060738.html> Birth Control Almost Ruined My Relationship. (Read comments after – what is striking about this article and the numerous comments after is how incredibly mood altering tiny shifts in hormones can be for some people—the question, of course, is why is this true for some people but not others – and are there clues here for FQ-induced endocrinopathies and “steroid psychosis” as well)