Merry Metabolic & Miscellanic Melodies

Kevin Ahern
Merry Metabolic & Miscellanic Melodies

by

Kevin Ahern

Oregon State University
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Course With No Aim</td>
<td>94</td>
</tr>
<tr>
<td>A Gay is No Danger</td>
<td>127</td>
</tr>
<tr>
<td>Algae</td>
<td>110</td>
</tr>
<tr>
<td>All My Junk Mail</td>
<td>159</td>
</tr>
<tr>
<td>All We Need are Votes.</td>
<td>144</td>
</tr>
<tr>
<td>Amino Alphabet Song</td>
<td>16</td>
</tr>
<tr>
<td>An Inequality</td>
<td>126</td>
</tr>
<tr>
<td>Anthem for BB 350</td>
<td>83</td>
</tr>
<tr>
<td>Anthem of the Ginseng and Tonics</td>
<td>176</td>
</tr>
<tr>
<td>Around the Nucleus</td>
<td>46</td>
</tr>
<tr>
<td>A Song for Barbara H.</td>
<td>107</td>
</tr>
<tr>
<td>At Dairy Queen</td>
<td>123</td>
</tr>
<tr>
<td>At the Coast Oregon’s Fine All the Year</td>
<td>186</td>
</tr>
<tr>
<td>A Waste of Money</td>
<td>155</td>
</tr>
<tr>
<td>Bad Instructor’s Anthem</td>
<td>97</td>
</tr>
<tr>
<td>Ballad of Andy Karplus</td>
<td>102</td>
</tr>
<tr>
<td>Battle Hymn of Biochemistry</td>
<td>89</td>
</tr>
<tr>
<td>BB Alma Mater Song</td>
<td>101</td>
</tr>
<tr>
<td>BB Office Battle Hymn</td>
<td>106</td>
</tr>
<tr>
<td>BB Wonderland</td>
<td>77</td>
</tr>
<tr>
<td>BB You’re the Sh*ts</td>
<td>82</td>
</tr>
<tr>
<td>B-DNA</td>
<td>41</td>
</tr>
<tr>
<td>Biochemistry, Biochemistry</td>
<td>81</td>
</tr>
<tr>
<td>Biochem is Beautiful</td>
<td>17</td>
</tr>
<tr>
<td>Biochemistry Pie</td>
<td>8</td>
</tr>
<tr>
<td>Bloody Things</td>
<td>37</td>
</tr>
<tr>
<td>Book of Life</td>
<td>25</td>
</tr>
<tr>
<td>Brain Farts Just Happen in My Head</td>
<td>85</td>
</tr>
<tr>
<td>Can’t Buy Enough</td>
<td>164</td>
</tr>
<tr>
<td>Catalyze</td>
<td>11</td>
</tr>
<tr>
<td>Cell’s Lament</td>
<td>43</td>
</tr>
<tr>
<td>Central Dogma Zen</td>
<td>32</td>
</tr>
<tr>
<td>Chromatin</td>
<td>47</td>
</tr>
<tr>
<td>Citrate Cycle Song</td>
<td>44</td>
</tr>
<tr>
<td>Codon Song</td>
<td>58</td>
</tr>
<tr>
<td>Colonoscopy Song</td>
<td>97</td>
</tr>
<tr>
<td>Complementary Bases</td>
<td>22</td>
</tr>
<tr>
<td>Composting Song</td>
<td>150</td>
</tr>
<tr>
<td>(The) Crappiest Weather</td>
<td>179</td>
</tr>
<tr>
<td>Crappy Days are Here Again</td>
<td>183</td>
</tr>
<tr>
<td>Deoxynucleotides</td>
<td>65</td>
</tr>
<tr>
<td>Dieter’s Song</td>
<td>30</td>
</tr>
<tr>
<td>Distance Ed</td>
<td>88</td>
</tr>
<tr>
<td>Don’t Get the Bends</td>
<td>75</td>
</tr>
<tr>
<td>Dumb Baby Names</td>
<td>167</td>
</tr>
<tr>
<td>E. coli Song</td>
<td>59</td>
</tr>
<tr>
<td>Elemental Learning</td>
<td>57</td>
</tr>
<tr>
<td>(The) End of the Term</td>
<td>95</td>
</tr>
<tr>
<td>Energy</td>
<td>72</td>
</tr>
<tr>
<td>Enzymes</td>
<td>10</td>
</tr>
<tr>
<td>Evolution</td>
<td>39</td>
</tr>
<tr>
<td>Fairway Eleven</td>
<td>172</td>
</tr>
<tr>
<td>Fatty Acids in Our Cells</td>
<td>71</td>
</tr>
<tr>
<td>Fishy Tales</td>
<td>130</td>
</tr>
<tr>
<td>Food Fight</td>
<td>108</td>
</tr>
<tr>
<td>Gay Waiter</td>
<td>171</td>
</tr>
<tr>
<td>Getting Wetter Every Day</td>
<td>182</td>
</tr>
<tr>
<td>Glucagon is Comin’ Around</td>
<td>35</td>
</tr>
<tr>
<td>Gluconeogenesis</td>
<td>6</td>
</tr>
<tr>
<td>God Bless These Complexes</td>
<td>62</td>
</tr>
<tr>
<td>God Rest Ye Merry Dieters</td>
<td>31</td>
</tr>
</tbody>
</table>
Gluconeogenesis
(To the tune of “Supercalifragilisticexpialidocious”)

When cells have lots of ATP and NADH too
They strive to store this energy as sugar, yes they do
Inside of mitochondria they start with pyruvate
(slow) Carboxylating it to make oxaloacetate

Oh gluconeogenesis is so exhilarating
Memorizing it can really be exasperating
Liver cells require it so there’s no need for debating
Gluconeogenesis is so exhilarating

Oh, glucose, glucose come to be
Glucose, glucose come to be

Oxaloacetate has got to turn to PEP
Employing energy that comes from breaking GTP
From there it goes to make a couple phosphoglycerates
(slow) Exploiting ee-nolase and mutase’ catalytic traits

Oh gluconeogenesis is liver’s specialty
Producing sugar for the body most admirably
Six ATPs per glucose is the needed energy*
Gluconeogenesis is liver’s specialty

Oh glucose, glucose joy to me
Glucose, glucose joy to me

Converting phosphoglycerate to 1,3BPG
Requires a phosphate that includes A-T-P energy
Reduction with electrons gives us all an N-A-D
(slow) And G3P’s isomerized to make D-H-A-P
Oh gluconeogenesis is anabolic bliss
Reversing seven mechanisms of glycolysis
To do well on the final students have to learn all this
Gluconeogenesis is anabolic bliss

Oh, glucose, glucose factory
Glucose, glucose factory

The aldolase reaction puts together pieces so
A fructose molecule is made with two phosphates in tow
And one of these gets cleaved off by a fructose phosphatase
(slow) Unless F2,6BP’s acting blocking path-a-ways

Oh gluconeogenesis a pathway to revere
That makes a ton of glucose when it kicks into high gear
The cell’s a masterminding metabolic engineer
Gluconeogenesis a pathway to revere

Oh glucose, glucose jubilee
Glucose, glucose jubilee

From F6P to G6P, that is the final phase
The enzyme catalyzing it is an isomerase
Then G6P drops phosphate and a glucose it becomes
(slow) Inside the tiny endoplasmic-al reticulums

Oh gluconeogenesis is not so very hard
I know that on the final we will not be caught off guard
‘Cause our professor lets us use a filled out index card
Gluconeogenesis is not so very hard

*Actually, you need two NADHs too, but that wouldn’t fit the rhyme :-)*
Biochemistry Pie
(To the tune of “American Pie”)

A long nine weeks ago
I can still remember
How the lectures sometimes made me smile
I pushed myself to study lots
So I could fill my head with thoughts
And then I’d find the effort all worthwhile

But mid-term one, it left me jaded
I worried as exams were graded
Sad news came from Kevin
The average - forty seven

It was so bad I went in shock
I couldn’t stand to hear the talk
Of Henderson and Hasselbalch
And bi-o-che-mis-try

So why why biochemistry why
Does percent misrepresent that
My attention is high?
And all the students have a rallying cry
Singin’ I will be a studious guy
I will be a studious guy

Did you draw an alanine?
And can you titrate a histidine?
If you know its p-K-a
Now do you believe you’ll have it made
If you can pull a decent grade
And can recitation lead me to an ‘A’?

Well we learned that protein structure is
A bunch of pleats and helixes
True beauty to behold
Man I dig how proteins fold!

There are seniors in pre-pharmacy
Learning all that chromatography
Gel filtration / HPLC
For bi-o-che-mis-try

I started Singin’
Why why biochemistry why
Must performance be enormous for
My grade to be high?
And all the students have a rallying cry
Singin’ I will be a studious guy
I will be a studious guy

Now for ten weeks we’ve been crammin’ in
The fact that nucle-i have spin
But that’s not all there is to see
There are six enzyme classes from EC
A catalytic triad three
And a voice that whispers Delta G

Oh, with enzymes there are lots of facts
Like low Kms and high Vmax
Some zymogens break down
If trypsin is around

And while Kevin lectured Milam Hall
His camera captured movies small
Sometimes they had no sound at all
In bi-o-che-mis-try

We were singing
Why why biochemistry why
Should I lament my last percent
If my incentive was high?
And all the students have a rallying cry
Singin’ I will be a studious guy
I will be a studious guy
R state, T state metabolic soul mates
Protein forms that we appreciate
ATCase binding siii----iiiites
They grab a C-T-P upright
The enzyme gets itself uptight
With aspartate on the sidelines out of sight

Then the stage was set for ex-am two
And some of us were feeling blue
I almost lost my nerve
Whoa, ‘til I moved up on the curve
‘cause my memory to me revealed
The answers that had been concealed
As if the key had been unsealed
For bi-o-che-mis-try

I’m always Singin’
Why why biochemistry why
Must a student be so prudent
Just to qua-a-lify?
And all the students have a rallying cry
Singin’ I will be a studious guy
I will be a studious guy

(two stanzas skipped here)

We all pulled down the MP3’s
And memorized the older keys
Then I just smiled and carried on
I went down to the class web site
To download ev-e-ry highlight
But the server said the pages were all gone

And in their rooms, the students stayed
The chemists crammed/the pre-meds prayed
There was no indecision
The end was in our vision
And the section that had made me fret
The questions for the problem set
I nailed them all without a sweat
In bi-o-che-mis-try

And I was singin’
Bye bye biochemistry bye
You can debit all my credit
‘Cause my grade is so high
And all the students have a rallying cry
Singin’ there’ll be a party tonight
There’ll be a party tonight

And I was singin’
Bye bye biochemistry bye
You can debit all my credit
‘Cause my grade is so high
And all the students have a rallying cry
Singin’ there’ll be a party tonight
Enzymes
(To the tune of “Downtown”)

Reactions alone
Could starve your cells to the bone
Thank God we all produce
Enzymes!

Units arrange
To make the chemicals change
Because you always use
Enzymes!

Sometimes mechanisms run like they are at the races
Witness the Kcat of the carbonic anhydrases

How do they work?
Inside of the active site
It just grabs onto a substrate
and squeezes it tight
In an ENZYME!

CAT-al-y-sis
In an ENZYME!
V versus S
In an ENZYME!
All of this working for you
(Enzyme, enzyme)

Energy peaks
Are what an enzyme defeats
In its catalysis
Enzymes!

Transition state
Is what an enzyme does great
And you should all know this
Enzymes!

Catalytic action won’t run wild - don’t get hysterical
Cells can throttle pathways with an enzyme allosteric
You know it’s true
So when an effector fits
It will just rearrange
all the sub-u-nits
Inside an ENZYME!

Flipping from R to T
ENZYME!

Slow catalytically
ENZYME!
No change in Delta G
(Enzyme, enzyme)

You should relax
When seeking out the Vmax though
There are many steps
Enzymes!

Lineweaver Burk
Can save a scientist work
With just two intercepts
Enzymes!

Plotting all the data from kinetic exploration
Let’s you match a line into a best fitting equation

Here’s what you do
Both axes are inverted then
You can determine Vmax and
Establish Km for your
ENZYMES!

Sterically holding tight
ENZYMES!

Substrates positioned right
ENZYMES!

Inside the active site
Enzymes (Enzymes, enzymes, enzymes)
Catalyze
(To the tune of “Close to You”)

My enzymes
Truly are inclined
To convert
Things they bind
Turn the key
Covalently
Cat-a-lyze

How do cells
Regulate these roles?
Allo-ster
-ic controls
Two forms, see
States R and T
Mod-u-late

Penicillin’s action stops
Peptidoglycan cross-links in
Bacterial cell walls in awesome ways
Beta lactam ring’s reactive site
Starts bonding with D-D-transpeptidase

So there are
Several enzyme states
Counteract
-ing substrates
Now you see
Blocking the key
Reg-u-lates

Cat-a-lysts
Have to be controlled
Some get slowed
Some on hold
It’s sublime
How the enzymes
(slow) Cat-a-lyze

Competing inhibition keeps
The substrates from the active site
They raise $K_m$, but leave $V_{max}$ and shirk
While the non-competers bind elsewhere
And lift the plot made on Lineweaver-Burk

Other ways
Enzymes can be blocked
When things bind
Then get locked
Stuck not free
Tied to the key
Su-i-cide

ahhhhhhhhhhhhhhhhhhh - cat-a-lyze
ahhhhhhhhhhhhhhhhhhh - cat-a-lyze
ahhhhhhhhhhhhhhhhhhhhhhh - cat-a-lyze
Photosynthesis is Divine
(To the tune of “Scarborough Fair”)

Photosynthesis is divine
Fixing carbon using sunshine
It’s thanks to plants that we’ve got a prayer
They pull CO$_2$ from the air

Reaping energy from the sun
It’s efficient second to none
You grab the photons almost at will
Protoporphyrin chlorophyll

Light reactions of System II
Split up water, making O$_2$
Electrons pass through schemes labeled ‘Z’
Pumping protons gradiently

ATP’s made due to a shift
Of the protons spinning quite swift
An enzyme turbine, cellular maze
You know as A-T-P synthase

Carbon’s fixed onto a substrate
Ribulose-1,5-bisphosphate
Rubisco acts in-e-f-ficient-ly
Splitting it into 3PGs

If the enzyme grabs an O$_2$
It makes glycolate, it is true
The Calvin cycle works in a wheel
Giving plants a sugary meal

So photosynthesis is divine
Cause it happens all of the time
From dawn to dusk and times in between
Solar panels truly are green
Get ATPs, bicarbonate, Ammonia catalyzing To make carba-mo-y-l phos-
phate And then start the synthesizing
When joined up with an orni-
thine In THE mi-TOE-chon-DREE-a It turns into a citrulline When cycling to urea

Urea! Urea! They call the stuff urea!

On exit to the cytosol There’s bonding aspartat-ic The argininosuccinate Is produced in this schematic

Bid farewell to a fumarate Amino panacea Arises when the arginine Gets lysed to form urea

Urea! Urea! You’ve just made some urea!

The body handles many things Requiring its attention Like balancing aminos for Uremia prevention

So if there’s excess nitrogen It is a good idea To rid yourself of surplus by Producing some urea

Urea! Urea! Go out and take a pee, yeah!

Urea! Urea! Have yourself a pee, yeah!
When Acids Are Synthesized
(To the tune of “When Johnny Comes Marching Home”)

The 16 carbon fatty acid, palmitate
Gets all the carbons that it needs from acetate
Which citric acid helps release
From mitochondri - matrices
Oh a shuttle’s great
When acids are synthesized

Carboxylase takes substrate and it puts within
Dioxy carbon carried on a biotin
CoA’s all gain a quick release
Replaced by larger ACPs
And it all begins
When acids are synthesized

A malonate contributes to the growing chain
Two carbons seven times around again, again
For saturated acyl-ates
There’s lots of N-A-DPH
That you must obtain
When acids are synthesized

Palmitic acid made this way all gets released
Desaturases act to make omega-threes
The finished products big and small
Form esters with a glycerol
So you get obese
When acids are synthesized
When Acids Get Oxidized
(To the tune of “When Johnny Comes Marching Home”)

The fatty acids carried by CoA, CoA
Are oxidized inside the mi-to-chon-dri-ay
They get to there as you have seen
By hitching rides on carnitine
Then it goes away
When acids get oxidized

Electrons move through membranes, yes it’s true, it’s true
They jump from complex I onto Co-Q, Co-Q
The action can be quite intense
When building proton gradients
And its good for you
When acids get oxidized

The protons pass through complex five you see, you see
They do this to make lots of A-TP, TP
The mechanism you should know
Goes through the stages L-T-O
So there’s energy
When acids get oxidized
The Amino Alphabet Song
(To the tune of “Twinkle, Twinkle Little Star”)

Lysine, arginine and his
Basic ones you should not miss
Ala, leu, val, ile, and met
Fill the aliphatic set
Proline bends and cys has ‘s’
Glycine’s ‘R’ is the small-EST
Then there’s trp and tyr and phe
Structured aromatically

Asp and glu’s side chains of R
Say to protons “au revoir”
Glutamine, asparagine
Bear carboxamide amines
Threonine and tiny ser
Have hydroxyl groups to share

These twen-TY amino A’s
Can combine a zillion ways
Biochem is Beautiful
(To the tune of “Everything is Beautiful”)

Students study molecules with
All of the structures they possess
Proteins, fats and DNAs
There must be a million ways
To evaluate our knowledge for the test

Biochem is beautiful
Our professor says
From the sugar in our cells
To actions of HDLs

And molecules are dutiful
In every way
Substrates for the enzymes are
Converted e-ver-y day

There is no enzyme
That can lower Delta G
They just work all the time
On transition energy
Catalysis provides to cells
Metabolic jump-startin
They all capitalize
By giving rise
To reactions ‘tween the carbons

Biochem is beautiful
Saying it with zest
Would be so much easier
If I could just ace the test

Biochem is beautiful
Saying it with zest
Would be so much easier
If I could just ace the test (fade)
Transcription
(To the tune of “Frosty the Snowman”)

Phos-pho-di-esters
Are the bonds of RNA
That support a ribopolymer
Made of G,C,U and A

The RNA polymerase
Binds to a TATA box
And copies from the template strand
All the along the way it walks

IN-i-ti-a-tion
Of transcription thus proceeds
From the closed to open complexing
In the DNA it reads

The sigma factor gets released
Its work is over fast
Polymerase can then advance
After this step has been passed

In elongation
The polymerizing spree
Moves along the way in fits and starts
Synthesizing five to three

The RNA is floppy and
It dangles from one end
Oh that’s a most important thing
For you to comprehend

Then termination
Fin-ish-ES the RNAs
Thanks to protein rho or hairpin forms
That release polymerase

So this describes transcription’s steps
In three part harmonies
Here’s hoping with this melody
You (can) learn it all with ease
Translation
(To the tune of “Maria” - from West Side Story)

Translation
The most intricate thing I ever saw

From five prime to three prime, translation, translation
The final step that we know about the central dog-ma
Amino, carboxyl, translation, translation . . .
Translation, translation, translation .

Translation!
I just learned the steps of translation
And all the things they say
About tRNA
Are true

Translation!
To form peptide bonds in translation
The ribosomal cleft
Must bind to an E-F
tee-you!

Translation!
A-U-G binds the f-met’s cargo
16S lines up Shine and Dalgarno

Translation
I’ll never stop needing translation
The most intricate thing I ever saw
Translationnnnnnnnnnnnnnnnnnnnnnn
Transposon
(To the tune of "Delta Dawn")

Trans-po-son
All that movin’ hither yon
You’re insertin’ yourself in the chromosomes
I guess it’s why they say
You’re the jumpin’ DNA
Movin’ and affectin’ proteomes

You’re carryin’ a gene that gives assistance
Helpin’ tiny bugs to pass resistance
To a drug that otherwise might kill ‘em dead
But with it they go on and live instead

McClintock studied you in Zea maize
Marveling at your mysterious ways
But the things you did went counter to what’s known
Somethin’ like a genetic Twilight Zone

Transposon
All the battle lines are gone
Over mechanisms Barbara did surmise
It’s good the truth came out
There will never be a doubt
That she truLY deserved the Nobel prize

Transposon
All the battle lines are gone
Over mechanisms Barbara did surmise
It’s good the truth came out
There will never be a doubt
That she truLY deserved the Nobel prize
Good Protein Synthesis
(To the tune of “Good King Wenceslaus”)

Amino acids cannot join
By themselves together
They require ribosomes
To create the tether

Elongation happens in
Ribosomal insides
Where rRNA creates
Bonds for polypeptides

All the protein chains get made
‘Cording to instruction
Carried by m-R-N-A
In peptide bond construction

These depart the ribosome
Passing right straight through it
In the tiny channels there
Of the large subunit

Small subunit starts it all
With initiation
Pairing up two RNAs
At the docking station

Finally when the sequence of
One of the stop codons
Parks itself in the A site
Synthesis can’t go on

Shine Dalgarno’s complement
In the 16 esses
Lines the A-U-G up so
Synthesis commences

P-site RNA lets go
Of what it was holding
So the polypeptide can
Get on with its folding
Complementary Bases
(To the tune of “California Dreamin’”)

Mendel took the lead (*Mendel took the lead*)
Working with his peas (*working with his peas*)
And then Miescher found the seed (*Miescher found the seed*)
Studying disease (*studying disease*)
By the nineteen forties (*by the nineteen forties*)
‘Twas clear it causes traits (*clear it causes traits*)
Complementary knowledge (*complementary knowledge*)
Led us to DNA

Chargaff’s bases had
   Only set ratios
Well then Watson-Crick took that (*Watson-Crick took that*)
   Info and proposed (*info and proposed*)
Bases each must have a partner (*each must have a partner*)
   G and C, T and A (*G, C, T and A*)
Complementary bases (*Complementary bases*)
   Make up the DNA

Now we know the truth (*Now we know the truth*)
   Of the form called B (*of the form called B*)
Thanks to Franklin’s work (*thanks to Franklin’s work*)
   And skullduggery (*and skullduggery*)
Though she hadn’t told them (*though she hadn’t told them*)
   They got it anyway (*got it anyway*)
Complementary data (*gave us our D-N*)
Complementary data (*gave us our D-N*)
   Complementary data
   Gave us our DNA
The Three R’s of DNA
(To the tune of “Dream a Little Dream of Me”)

Base pairs they all provide you
Stair steps to form a helix inside you
A pairs with T and G goes with C
Making DNA for me

Helicases go unwinding
Unzippering at rates almost blindin’
PO-lymerases work night and day
Replicating D-N-A

Bridge
Proof-reading - the enzyme’s Q/C path
Chews back from the 3’s
I can’t have a ‘G’ paired with ‘T’ so
Repair it please

Chem damage is concern too
‘Cuz it can cause mutations inside you
When dimers stem from sunlight UV
Fix the DNA for me

Such pathways of excision
Cause cells to have to make a decision
Should they go straight ahead with repair
Or take themselves right out of there?

Bridge
Then lastly, there’s recombination
Swap strands readily
Crossover homologous regions
Mix them for me

This story is complete now
The DNA is fit for gametes now
The three R’s for our DNA shine
Replicate, repair, recombine
Oh yeah!
Replicate, repair, recombine
The Restriction Enzyme Song
(To the tune of “Chim Chim Cher-ee”)

I’m obsessed with A-A-G-C-T-T
Because it’s the binding site of Hin-d-III
Cutting up DNA most readily
The ends are not blunt when they’re cut up you see

Five prime overhangs of A-G-C-T

Bacteria don’t have an immune system so
They must fight off phages or they will not grow
Protection by chopping is their strategy
And one of the cutters we call Hin-d-III

On binding to A-A-G-C-T-T
The site recognition site’s bent easily
Phosphodiester attacking meanwhile
Has water behaving as nucleophile

To stave off the phage for a little while

Why don’t these enzymes cut cell DNAs?
The answer’s provided by a methylase
Adding a methyl group on top of what
The sequence these enzymes would otherwise cut

So cells get protected in this simple way
From nuclease chewing of their DNA
The phage is not lucky in most every case
Unless methylases win the enzyme race

If that happens then, the cell gets erased
The Book of Life
(To the tune of “The Look of Love”)

The book of life - the stuff of dreams
Is everywhere, it seems

The book of life, is biochemistry and
Its words fill every day
Just what it says is written in the DNA

I just want to get to know it
How the info’s coded
What are all the secrets?
Ribosomes can read it
Goodness knows it’s needed

And so its alphabet’s
In codon forms
For ribosome bookworms

They read it right
A protein’s function to its sequence corresponds
It’s not just randomly created peptide bonds

What a marvel of creation, how they do translation
Of m-R-N-A chains,
Using bits of glycine
Proline and some lysine
Translate the code

Instrumental

I just marvel at the knowledge
That I got in college
To learn all the secrets
Double helix spaces
Complementary bases
Pyrimidines
Paired to purines
The book of life
The Sound of Glucose
(To the tune of “A Few of My Favorite Things”)

Aldehyde sugars are always aldoses and
If there’s a ketone we call them ketoses
Some will form structures in circular rings
Saccharides do some incredible things

Onto a glucose we add a ‘P’ to it
ATP energy ought to renew it
Quick rearranging creates F6P
Without requiring input energy

At a high rate
Add a phosphate
With PFK
F1,6BP is made up this way
So we can run and play

Aldolase breaks it and then it releases
DHAP and a few G3Pieces
These both turn in to 1,3 BPG
Adding electrons onto NAD

Phosphate plus ADP makes ATP
While giving cells what they need - en-er-gy
Making triphosphate’s a situa-shun
Of substrate level phosphoryla-shun

3-B-P-G
2-B-P-G
Lose a water
PEP gets a high energy state
Just to make py-ru-vate

So all the glucose gets broken and bent
If there’s no oxygen cells must ferment
Pyruvate / lactate our cells hit the wall
Some lucky yeast get to make ethanol

This is the end of your glucose’s song
Unless you goof up and get it all wrong
Break it, don’t make it to yield ATP
You’ll save your cells from fu-ti-ly
Hark the Sucrose
(To the tune of “Hark the Herald”)

Carbohydrates all should sing
Glory to the Haworth ring
Anomeric carbons hide
When they’re in a glycoside

Glucopyranose is there
In the boat or in the chair

Alpha, beta, D and L
Di-aster-e-omer hell

Alpha, beta, D and L
Di-aster-e-omer hell

The Vegetarian’s Song
(To the tune of “Blowin’ in the Wind”)

How many hot dogs did you eat today?
With all of those nitrites inside?

And those het-ero-cyclic amines in your steak
Were not something you should have tried

There’s cancer my friend
Inside your bottom end
There’s cancer inside your bottom end
Your Poor Veins
(To the tune of “You’re So Vain”)

Well I raced off to my doctor
Cause I was feelin’ the twinges of pain
I was worried about my heart ‘cause I
Was overweight once a-gain
She took one look at my profile and
Just shook her head and complained

“You gotta wake up and change all that junk
you’ve been eating
Junk you’ve been eating. ‘Cause

Your poor veins
Are plugged ‘cause you are wolfin’ the butter
And LDLs
Are makin’ your heart go a-flutter
Flutter, Flutter”

She had warned me several months before
But I just ignored what was said
She told me, “You look like a heart attack”
“It’s surprising that you’re not dead”
I walked away in disbelief
And ate more bad food instead

I loaded oodles of cream in my tall Macchiatos
Tall Macchiatos and

LDLs
Went up as I was gulping ‘em down my
LDLs
Just turned a smile right into a frown
A frown, a frown

I decided to make a change right there
The diet was merely step one
All the trans fats were banished from my food
And I started to jog just for fun
I had one foot in the grave when I
Discovered what I had done

I moved away from the edge of
the doorstep of death to
Re-gaining my breath when my

HDLs
Increased since I was eating more smartly
HDLs
They lowered my cholesterol partly
Partly, partly

Well you know I’m feeling much better now
And my heart is surely relieved
A factor certainly is the unsaturates
Contained in my sunflower seeds
Yeah the fatty acids were the keys
Essential things that we need

Those fish oil capsules
and o-mega threes cleaned
My ar-ter-ies with

HDLs
They’re more than just the latest hot crazes
HDLs
They saved me so I’m singing their praises
Praises, Praises
I’ll Be Thin at Christmas
(To the tune of “I’ll Be Home For Christmas”)

I’ll be thin at Christmas
If I drop twelve pounds
I’ll be svelte beneath the belt
As hopeful as that sounds

No Thanksgiving turkey
Salad’s fine for me
I’ll be eating lightly
Of this I guarantee

I’ll be thin at Christmas
Exercise is key
I’m the one to take a run
To get the Christmas tree

Christmas Eve will find me
Narrowed at the gut
I’ll be thin for Christmas
Especially round my butt
The Dieter’s Song
(To the tune of “The Story of Love”)

You better lose your middle
Run a little
Get yourself fit as a fiddle

You must break a sweat
And you’ll truly get
Fit

You need to change your diet
Don’t deny it
Reducing intake you should try it

Hold off on the cheese
Count the calories,
Love

(Bridge)
Whenever there is juicy stuff
You need to ponder on the cost
Cuz just a little is enough
Or else your diet’s lost

You wanna move your waistline
To the baseline
Give those legs a bit of racetime

It is worth the sweat
When you truly get
Fit

*Sometimes called “Glory of Love”*
God Rest Ye Merry Dieters
(To the tune of “God Rest Ye Merry Gentlemen”)

God rest ye merry dieters
With high cholesterol
Your chylomicrons all contain
Triacylglycerols
And move from lymph to capillaries
Where their progress stalls
Tha-anks lipo protein li-pase,
Protein lipase
O-oh thank you lipo protein li-pase
And after their fat goodies
Have been hydrolyzed away
The chylomicron remnants
Go along their merry way
The liver grabs them from the blood
And puts them all away
Just as we should do with
Kenneth Lay,
Kenneth Lay
O-oh just as we should do with
Kenneth Lay
And when the liver gets a message
From the body’s cells
It makes up little packages
We call VLDLs
They seem like chylomicrons, but turn
In to something else

Please don’t become the LDLs,
LDLs
O-oh please don’t become the LDLs
For LDLs cause chaos
When their insides oxidize
The macrophages bind to them
And foam cells can arise
You’d better watch your diet
Or your blood flow will downsize
And that would not be very wise,
Very wise
No-oh that would not be very wise
So if you take some lessons from
This little comic bit
Your diet should be healthy
And you should try to stay fit
Eat greens and drink red wine but try
Not to overdo it
And your heart will never ever quit
Want to quit
No, no your heart will never ever quit
Central Dogma Zen
(To the tune of “Those Were the Days, My Friend”)

Once upon a time a cell decided
The time was ripe for it to split in two
Had to copy cellular instructions
For the daughter cell would need them too.

Bring in a helicase
Unzip the DNAs
To ease the stress a gyrase joins the fray
Strands must be held apart
And primase builds a primer RNA.

Sliding clamp comes in behind clamp loader
dNTPs floating all around
In the wings a replicase is waiting
For the chance to start another round.

Polymerase, my friend
Starts at the 3’ end
It puts a ‘T’ across from every ‘A’
A ‘G’ across from ‘C’
Perfect simplicity
The leading strand is made in just this way.

The lagging strand is made in little pieces
Okazaki fragments, you recall
Pol I fills the gaps that lie between them
Ligase comes in next and joins them all.

Blueprints can’t have mistakes
That’s why polymerase
Corrects its work with exonuclease
Proofreading one by one
Till all its work is done
Hurray for D-N-A polymerase!

An organism’s cellular construction
With blueprints for the things they have to do
Requires converting DNA instructions
To ribopolymers, oh yes it’s true
Because they’ve been bestowed
With a genetic code

The RNAs provide the cell with means
To link amino A’s
In most directed ways
Inside the protein-making cell machines

If “coli” cells don’t have galactosidase
And lactose should appear inside its food
The lac repressor leaves the operator
‘Cause otherwise metabolism’s screwed

Polymerase unwinds
The DNAs it binds
Adjacent to the start site where it docks
Unravels A’s and T’s
With such amazing ease
At the promoter’s little TATA box

The process moves along without much trouble
While making RNA inside the cell
It all occurs inside transcription bubbles
Where bases get linked anti-parallel

mRNA then roams
To find some ribosomes
Subunits large and small bind near the end
The A-U-G’s in place
Inside the P site space
Initiation you can comprehend

The mechanism shifts to elongation
Proceeding by three bases at a stretch
A GTP’s required for translocation
Advancing 5 to 3 the whole complex

The process moves anon
Until a stop codon
Arrives and causes movement to suspend
Translation has to cease
A peptide gets released
And we have reached the central dogma’s end.

This song was co-written with Indira Rajagopal
I’ve Just Run a Gel  
(To the tune of “I’ve Just Seen a Face”)  

I’ve just run a gel.  
I do not think it went too well  
I may have used a bit much SDS.  
The stacker’s looking like a mess.  
It’s true  
Oh now what will I do?  

The protein sample’s my last one.  
To purify it was not fun  
I spent three weekends working late.  
The middle lanes aren’t looking great.  
I’m screwed  
Good God what will I do?  

Crawling.  
I’m almost bawling  
The boss is calling  
To follow through  

I just loaded all I’ve got  
To make this final western blot  
My fingers are both crossed for sure  
I hope my protein product’s pure.  
I do  
Then my thesis is through  

Staining.  
My eyes are straining  
There’s no complaining.  
I say ‘wahoo’  
‘Cuz it has the band I need  
I’ll go and have it scanned to speed  
The writing of my thesis and  
Proceed onto the post-doct’ral plan  
Oh that will be so grand  

Pieces  
Make up my thesis.  
No more ‘phoresis.  
The promised land.  

Writing  
So unexciting.  
But no more biting  
My nails again.  

Writing  
Is coinciding.  
With reference citing.  
I’m at the end.
The Tao of Hormones
(To the tune of “The Sound of Silence”)

Biochemistry my friend
It’s time to study you again
Mechanisms that I need to know
Are the things that really stress me so
“Get these pathways planted firmly in your head,”
Ahern said
Let’s start with ep-inephrine

Membrane proteins are well known
Changed on binding this hormone
Rearranging selves without protest
Stimulating a G alpha S
To go open up and displace its GDP
With GTP
Because of ep-inephrine

Active G then moves a ways
Stimulating ad cyclase
So a bunch of cyclic AMP
Binds to kinase and then sets it free
All the active sites of the kinases await
Triphosphate
Because of ep-inephrine

Muscles are affected then
Breaking down their glycogen
So they get a wad of energy
In the form of lots of G-1-P
And the synthases that could make a glucose chain
All refrain
Because of ep-inephrine

Now I’ve reached the pathway end
Going from adrenalin
Here’s a trick I learned to get it right
Linking memory to flight or fright
So the mechanism that’s the source of anxious fears
Reappears
When I make ep-inephrine
Glucagon is Coming Around
(To the tune of “Santa Claus is Coming to Town”)

You’ve gotta admire
What molecules do
Their cellular fire
Is ready on cue
Glucagon is coming around

Receptor outside
G protein finds
G nucleotides
Glucagon is coming around

They activate cyclases
That make cAMPs
Which bind to protein kinases
And pull the R’s from C’s

The glycogen shrinks
In liver quite fast
The glucose into
The bloodstream is passed
Thanks to this you have energy

Your muscles uptake
The glucose in turn
Obtaining a substrate
That all of them burn
Thanks to this you have energy

The pool of phosphatidyl
Inositides in you
Can send two separate signals
When they get split in two

The IP$_3$ sets
The calcium free
Turning on
Protein Kinase C
And it happens so easily

The muscles contract
When calcium’s free
Lowering levels
Of Creatine-P
And it happens so easily

Those little calcium ions
I hope you’ve learned them well
Are just like Martha Stewart
All locked up in a cell

This story’s complete
I know it’s a load
My hope is your head
Ain’t gonna explode
You will need it in finals week
Hemoglobin’s Moving Around
(To the tune of “Santa Claus is Coming to Town”)

Oh isn’t it great
What proteins can do
Especially ones that bind to $O_2$
Hemoglobin’s moving around

Inside of the lungs
It picks up the bait (and)
Changes itself from T to R state
Hemoglobin’s moving around

The proto-porphyrin system
Its iron makes such a scene
Arising when an $O_2$ binds
Pulling up on histidine

The binding occurs
Cooperatively
Thanks to changes qua-ter-nar-y
Hemoglobin’s moving around

It exits the lungs
Engorged with $O_2$
In search of a working body tissue
Hemoglobin’s moving around

The proton concentration
Is high and has a role
Between the alpha betas
It finds imidazole

To empty their loads
The globins decree
“We need to bind 2,3BPG”
Hemoglobin’s moving around

The stage is thus set
For grabbing a few
Cellular dumps of $CO_2$
Hemoglobin’s moving around

And then inside the lungs it
Discovers ox-y-gen
And dumps the $CO_2$ off
To start all o’er agin

So see how this works
You better expect
To have to describe the Bohr effect
Hemoglobin’s moving around
The Bloody Things
(To the tune of “(Coke®) It’s the Real Thing”

I’m gonna put some oxygens
beside my porphyrin rings
To nudge the irons up a notch
and yank on histidines
The globins’ shapes will change a bit,
oh what a sight to see
The way they bind to oxygen
co-op-er-AH-tive-ly

And as I exit from the lungs
to swim in the bloodstream
Metabolizing cells they all
express their needs to me
To them I give up oxygen
and change from R to T
While my amines, they hang onto
the protons readily

But that’s not all the tricks I know,
there’s more that’s up my sleeve
Like gaps between sub-U-nits that
hold 2,3-BPG
When near met-a-bo-LI-zing cells,
I bind things that diffuse
The protons and bicarbonates
from lowly cee oh twos

Chorus
That’s the way it is
When your cells are at play
Go say hip hip hooray
For the bloody things
Thank Goodness My Blood is Clotting
(To the tune of “Don’t Sleep in the Subway Darling”)

I’m feeling so sad
‘Cuz I cut . . . . myself bad
Now I’m all worried ‘bout . . . consequences

It’s starting to bleed
There’s some clot . . . . sure I need
So the body kicks . . . . in its defenses

It’s happened all so many times before
The blood flows out and then it shuts the door

Thank goodness my blood is clotting
Enmeshing the fibrin chains
Thank goodness my blood is clotting
The zymogens
Are activating and all is well
So I’ll stop bleeding again

The vitamin K’s
Help to . . . . bind to cee-ays
Adding C-O-. . . . O-H to amend things
Um-m-um-um-um-um-um

It hardens and stays
When a glutathione taminase
Creates co- . . . valent bonds . . for cementing
In just a moment, things are good to go
The clot’s in place and it has stopped the flow

But what about clot dissolving?
Untangling fibrin chains?
This calls for some problem solving
There is a way
Just activate up some t-PA
Get plasmin active in veins

Oh, oh, oh.
And thanks to the dis-enclotting’
As part of repairin’ veins
It’s part of my body’s plotting
The wound is gone
I’m back where I started and
Nothing’s wrong
My blood flow is normal again.
Evolution
(To the tune of “Revolution”)

You don’t believe in evolution
Well it’s so
Religion’s gone and left you blind

Intellectually you live in seclusion
Well you know
You need to go and free your mind

‘Cause when you’re messin’ with instruction
Don’t you know that you should stop it now

   Because it cannot be –
   Designed
   (It cannot be) Designed
   (It cannot be) Designed

You think design’s a real sensation
Well you know
You need to go and get a clue

   The aim’s to alter education
   And you know
   That’s such a scary thing to do

You’re gathering money from the religious right
All I can do is hope you will see the light
Because it’s truly not - designed
(Should never be) assigned
(Since it is not) defined

You want to change the institution
Well you know
You really need to change your view

‘Cause this is such a state of confusion
And you know
(A) reality check is overdue

So if you’re chanting and marching to Fox news heads
You need to go out and get a life instead
And then it will surely be
All right /All right / All right / All right / All right / All right
The Ribosome
(To the tune of “America the Beautiful”)

O beautiful with R-N-A
That makes the peptide bonds
You hold t-RNA so it
Can pair up with co-dons

The Ribosome! The Ribosome!
Translate m-RNA
Initiate and translocate
From start to U-G-A

Oh Delta Gee
(To the tune of “Oh Danny Boy”)

Oh Delta Gee - the change in Gibbs free energy
Can tell us if a process will advance
‘Cause if the value’s less than naught it translates that
Reverse reactions haven’t got a chance

But when the sign is plus it is the opposite
And then the backwards happens all the time
A factor is the standard Gibbs free energy
So don’t forget about the delta G naught prime
B-DNA
(To the tune of “YMCA”)

Phosphates
Are in nucleotides
I say phosphates
Cover bases inside
I say phosphates
Span the 5 and 3 primes
There’s no need-to-be-all-mixed-up

Bases
Carry info you see
I say bases
Are all complement’ry
I say bases
Like A,T,G and C
They have got-to-be-all-paired-up

It’s fun to play with some B-DNA
It’s got a boatload of G-C-T-A
It’s got everything
A polymerase needs
When you melt all the A’s and T’s

It’s fun to play with some B-DNA
It’s got a boatload of G-C-T-A
You can make RNAs
With a po-ly-mer-ase
Just by pairing up U’s with A’s

Proteins
Full of amino A’s
I say proteins
Come from mRNAs

I say proteins
Require tRNAs
There is more—you-need-to–trans-late

Codons
Like our friend U-A-C
I say codons
Come in clusters of three
I say codons
Have one base wobble –ee
Now you can-go-forth-and-trans-late

It’s fun to play with some B-DNA
It’s got a boatload of G-C-T-A
All those hydrogen Bs
And right-hand he-li-ces
Anti-par-a-llel fives and threes

It’s fun to play with some B-DNA
It’s got a boatload of G-C-T-A
All those hydrogen Bs
And right-hand he-li-ces
Anti-par-a-llel fives and threes

It’s fun to play with some B-DNA
It’s got a boatload of G-C-T-A
All those hydrogen Bs
And right-hand he-li-ces
Anti-par-a-llel fives and threes
Major Groovy
(To the tune of “Feelin’ Groovy”)

The DNA forms
A and B
Have bases
Complementary
Despite the similarities
They differ in their
Major groovies
Nananananananana major groovy

Transcription factors
With their bindin’
‘ Cause DNA to
Start unwindin’
Holding it
Aggressively
By forming bonds in
Major groovies
Nananananananana major groovy

For proteins, the key
To sequence I-D
Is hydrogen bonding, each base pair unique
Purine, pyridine patterns discrete
In DNA’s most
Major groovy
Nananananananana major groovy
The Cell’s Lament
(To the tune of “Yesterday”)

Woe is me
My substrates are losing entropy
Causing gains in Gibbs free energy
Oh I can’t lose no en - tro- py

Re-a-llly
I could use a source of enthalpy
To combat the rise in Delta G
Oh I believe in enthalpy

I crave en-er-gy
Don’t you see?
It’s getting worse

My re-actions all
Soon will stall
And then rever-r-r-se

ATP
It’s the metabolic currency
Guess I’ll spend a bit judiciously
To help reduce the Delta G
Help reduce the Delta G
Citrate Cycle Song
(To the tune of “When Irish Eyes Are Smiling”)

This song uses only the chorus of the original

The citric acid cycle
Is a source of energy
It gets electrons moving
While reducing NAD

It starts with citric acid
Turning to aconitate
Which becomes an isocitrate
On the way to glutarate

The loss of one more carbon
Gives succinyl-CoA
And then succinic acid
When the CoA goes away

A further oxidation
Gives one trans fumarate
Which gains a water on the
Next step to make malate

One simple oxidation
Makes O-A-A you see
Which combined with Ac-Co-A
Returns us cyclically
To Make a Cholesterol
(To the tune of “When Johnny Comes Marching Home”)

Some things that you can build with acetyl-CoAs
Are joined together partly thanks to thiolase
They come together 1-2-3
Six carbons known as H-M-G
And you’re on your way
To make a cholesterol

The mevalonate made in metabolic schemes
Gets decarboxylated down to isoprenes
They’re linked together willy-nil
To build a PP-geranyl
In the cells’ routines
To make a cholesterol

To synthesize a mevalonate in the cell
Requires reducing HMG-CoA, as well
The enzyme is a RE-ductase
Controlled in allosteric ways
When the cell’s impelled
To make a cholesterol

A single step links farnesyls but that’s not all
The squalene rearranges to lanosterol
From that there’s nineteen steps to go
Before the sterol’s apropos
Which you must recall
To make a cholesterol

The regulation of the scheme’s complex in ways
Inhibited by feedback of the RE-duc-tase
And statins mimic so they say
The look of HMG-CoA
So we sing their praise
And not make cholesterol
Around the Nucleus
(To the tune of “Across the Universe”)

DNA gets spooled like balls of yarn
   Within the chromosomes
Unwinding when it’s duplicated there
   Around the nucleus

   Primase sets down RNA
   To pave the path for DNA
   Across a replication fork

   Complementarit-y rules (a)
   DNA Pol-y-mer-ase
   Synthesizing DNAs
   (and) RNA Pol-y-mer-ase
   Making all the RNAs

   Helicases split the strands
   In front of replication forks
   To make templates accessible
   Around the nucleus

   Complementary bases
   Match the bonds of ‘H’ and hold the strands
   Together till they’re pulled apart
   Around the nucleus

   Hydrogen bonding fuels
   Tiny alpha helix bands
   Folding for the cells’ demands
   Beta sheets comprised of strands
   Meeting little cells’ demands

   Exons link majestically all guided
   By a master plan encoded in the cell’s genome
   That’s buried deep inside of me
   Countless combinations of the codons
   Bring diversity to life evolving on and on
   Around the nucleus

   COM-plex-es rule the world (with)
   Ribosomes and spliceosomes
   Transforming the cells’ genomes
   Ribosomes and spliceosomes
   Builders of the proteomes
Chromatin
(To the tune of “Sunshine on my Shoulders”)

Side chains of the lysines bind to phosphates
Minus charges cling to plusses tight
Chromatin assembly is essential
Eukaryotic cells must get it right

Cells are tiny micro-scaled enclosures
With nuclei tucked deep in their insides
That’s the place amazingly enough that
Seven feet of DNA resides

H2a and H2b have lysines
That’s how they get charges don’t forget
Paired with H’s three and four they make up
A chromatin core’s octameric set

These get organized in higher orders
Changing with the cycles of the cell
Denser packing going through mitosis
At other times the structures simply swell

So because of all the hyperpacking
Nuclei can hold entire genomes
Thank the histones spooling DNA for
Physically downsizing chromosomes
Serine Protease Song
(To the tune of “Blackbird”)

Substrate floating in the cell’s insides
Enzyme snags it with its binding site
   It supplies
Shuffling of electrons in the act to catalyze

Proteases of the serine kind
Break up peptide bonds in rapid time
   Fast and slow
Steps in breaking bonds are mechanisms you should know

Asp – his - ser
Bonds beware
Inside the S1 pocket substrate sits

Alkoxides
Break peptides
Nucleophiles give bonds the fits

Peptide one exits easily
But water has to let the other flee
   Bound not free
   ‘Cuz the enzyme’s linked to it in mechanism three

When it’s gone the enzyme’s free to catalyze you see
When it’s gone the enzyme’s free to catalyze you see
The New Serine Protease Song
(To the tune of “Rudolph the Red-Nosed Reindeer”)

All serine proteases
Work almost identically
Using amino acid
Triads catalytically

First they bind peptide substrates
Holding onto them so tight
Changing their structure when they
Get them in the S1 site

Then there are electron shifts
At the active site
Serine gives up its proton
As the RE-ac-tion goes on

Next the alkoxide ion
Being so electron rich
Grabs peptide’s carbonyl group
Breaks its bond without a hitch

So one piece is bound to it
The other gets set free
Water has to act next to
Let the final fragment loose

Then it’s back where it started
Waiting for a peptide chain
That it can bind itself to
Go and start all o’er again
The Muscle Song
(To the tune of “I Will”)

For running and for jumping
You need some energy
Chemically the body stores it
In the form of ATP

If backup should be needed
Reserves are there in wait
Muscles brimming with supplies of
Tiny creatine phosphate

Ready whenever cells are ever
Needing to exercise
Steady as ever when whatever
Energy needs arise

The action is exacting
For leaping in the air
Myofibrils all contracted
Using energy extracted
From reactions that react in me
Using A-T-P
You see
N-A-D
(To the tune of “Penny Lane”)

In the catabolic pathways that our cells employ
Oxidations help create the ATP
While they lower Gibbs free energy
Thanks to enthalpy

If a substrate is converted from an alcohol
To an aldehyde or ketone it is clear
Those electrons do not disappear
They just rearrange – very strange

N-A-D is in my ears and in my eyes
Help-ing mol-e-cules get oxidized
Mak-ing N-A-D-H then

And the latter is a problem anaerobically
‘Cause accumulations of it muscles hate
They respond by using pyruvate
To produce lactate

Catalyzing is necessity for cells to live
So the enzymes grab their substrates eagerly
If they bind with high affinity
Low Km you see – just trust me

N-A-D is in my ears and in my eyes
Help-ing mol-e-cules get oxidized
Mak-ing N-A-D-H then
Prostaglandins!
(To the tune of “Oklahoma!”)

Prosssss-taglandins
The ei-co-sa-noids creating pain
Are the ones to blame
When you get inflamed
And ouch(!)
They hurt inside your brain

Prosssss-taglandins
Every throb and ache gets magnified
If you hope to win,
Cyclo-oxygen’s
Generation’s got to be denied

The Vioxx has all been recalled
So go get yourself Tylenol-ed

And if you aaaaaaaaaaaaaaache
Blame PGH synthaaaaaaase!

We must complain that
You make the aches prostaglandins
Prostaglandin - D2, F1, G2, E2

Prostaglandin, it’s you
Hyaluronic Acid
(To the tune of “Rudolph the Red-Nosed Reindeer”)

Hyaluronic acid
Acting almost magically
Placed just beneath the kneecap
Lubricating the debris

Better than joint replacement
Simple as 1-2-3
If it can stop the aching
You will get to keep your knee

Bridge
When the pain is getting bad
Try not to be sad
Just go out and have a talk
With your orthopedic doc

Beg him to use the needle
To not do so would be a crime
Hyaluronic acid
Working where the sun don’t shine
In My Liver
(To the tune of “And I Love Her”)

If I am missing meals
On busy days
That’s when my body steals
Glucose away
From my liver

It starts with glucagon
When I’m weak kneed
The hormone acts to spawn
New energy
In my liver

Bridge
The signaling
Acts rapidly
c-A-M-P’s
Fire up kinase

Phosphorylase then gets
Re-activated
So glycogen begets
Glucose phosphated
In my liver

Instrumental

Then in the last step here
A phosphatase
Makes phosphate disappear
With no delays
In my liver
The Vision Thing
(To the tune of “Star Spangled Banner”)

Did you know you can see?
In the dimmest of light
With your rods and your cones
And their retinaldehyde

Found in rhodopsin it’s
Got a bond shaped as cis
But it changes its state
When a photon gets it straight

Then the sign’ling kicks in
Thanks to a transducin
Cuz its GTP ways
Turn on diesterase

So gated ion channels stop
Charges from passing through
Such as sod-i-um plus one
And cal-ci-um plus two
Henderson Hasselbalch
(To the tune of “My Country ‘Tis of Thee”)

Henderson Hasselbalch
You put my brain in shock
   Oh woe is me
The pKa’s can make
Me lie in bed awake
They give me really bad headaches
   Oh hear my plea

Salt - acid RA-ti-os
Help keep the pH froze
   By buf-fer-ING
They show tenacity
Complete audacity
If used within capacity
To maintain things

I know when H’s fly
A buffer will defy
   Them actively
Those protons cannot waltz
When they get bound to salts
With this the change in pH halts
   All praise to thee

Thus now that I’ve addressed
This topic for the test
   I’ve got know-how
The pH I can say
Equals the pKA
In sum with log of S o’er A
   I know it now
Elemental Learning
(To the tune of “Sentimental Journey”)

Gonna do
Some elemental learning
Studying for my degree

Elevate
My supplemental earnings
With atomic chemistry

Learning ‘bout
The subatomic units
In an atom’s nucleus

Balance charge
With all of the electrons
Or an ion you’ll possess

Neutrons
They’re the chargeless bits in
Atoms
Protons sometimes wish they had ‘em
Gotta have an a-dequate supply
In nuclei

If you don’t
There’ll be a price for payin’
For the instability

‘Cuz you’ll get
The nucleus decaying
Radi-o-activity

Elemental Learning!
The Codon Song
(To the tune of “When I’m 64”)

Building of proteins, you oughta know
Needs amino A’s
Peptide bond catalysis in ribosomes
Triplet bases, three letter codes

Mixing and matching nucleotides
Who is keeping score?
Here is the low down
If you count codons
You’ll get sixty four

Got - to - line - up - right
16-S R-N-A and
Shine Dalgarno site

You can make peptides, every size
With the proper code
Start codons positioned
In the P site place
Initiator t-RNAs

UGA stops and AUGs go
Who could ask for more?
You know the low down
Count up the codons
There are sixty four
The *E. coli* Song
(To the tune of “Rudolph the Red-Nosed Reindeer”)

*E. coli*’s very simple
That’s the way the story goes
But if you worked around it
You would probably hold your nose

Most of the other cell types
Have a mitochondrion
They use to make triphosphates
By phos-phor-y-la-she-un

When there is no oxygen
*Coli*’s got it made
Glucose breakdown products all
Wind up making ethanol

Then all the cells around it
Shout *E. coli*’s name with glee
“You make us feel light-headed”
“When you act fermentally”
I’m Ill
(To the tune of “I Will”)

Who knows how long I’ll be here
I think I need a pill
My insurance doesn’t cover
Anything if I am ill

I must have medication
To flow inside my veins
Gotta buy it out of pocket
Little money lotsa pain

Medicines never work forever
It’s all the same refrain
Healthcare is ever stormy weather
Wish I could stop the rain

But one day when I’m healthy
A song will fill the air
And my smile will clearly show it
All my friends will surely know it
When the Facebook status quote for me
Says I am not ill
Not ill.
The Weight I Gained Last Week
(To the tune of “The Way You Look Tonight”)

Monday. Feeling like a whale
Staring at the scale
It’s an awful tale that I ate - too much
And I gained some weight last week

I was slimmer with a bum so small
And my spirits tall
Now there’s more of me and you get to touch
All the weight I gained last week

With each bite, my appetite grew
Nibble-ing on the cheese
Brie and goat, gouda and blue
Too many cal-o-ries

Lonely. Like I’ve got the plague
I must not be vague
I’ll go Jenny Craig it
I can burn off
All that weight I gained last week

Brie and goat, gouda and blue
Too many cal-o-ries

Lonely. Like I’ve got the plague
I must not be vague
I’ll go Jenny Craig it
I can burn off
All that weight I gained last week

Mmmm
All that weight I gained last week
God Bless These Complexes
(To the tune of “God Bless America”)

All information in
Cells’ DNA
Just increases
With pieces
Mixed and matched in the mRNAs
Linking exons
All together
Using snurps in
Complex-ES
God bless the spliceosomes
And trans-crip-tomes
(slow and loud) God bless the spliceosomes
And my ge-nome

Your blueprint info is
In DNA
Since you need it
Proofread it
Or you’ll mutate the mRNA
You can translate
All the codons
With the cells’ gen-et-ic code
God bless the ribosomes
They translate code
(slow and loud) God bless the ribosomes
And proteomes
The Number Song
(To the tune of “Everybody Loves Somebody Sometime”)

Avogadro’s number is a huge one
Boltzmann’s constant’s rather miniscule
Values differing enormously
As we learned in school

Science numbers need to have dimensions
Size is not the most important thing
Units give the yardsticks needed
For under-STAN-ding

Bridge
It’s taught in the ivory towers
By professors it’s so ballyhooed
Values can have such diff’rent powers
That to know them we must have their magnitudes

One light year’s a really lengthy distance
Grams define the masses high and low
The ohm can measure the resistance
If current should flow

Bridge
One set of factors you SHOULD know
The roots of seven and of three et al
Cannot be expressed as a ratio
Oh these numbers all are quite irration-al

Three point one four one five nine two six five
No end to Pi’s digits it’s absurd
Endlessly reminding me that I’ve
BEEN SO OUT-num-bered
I Wanna Hold Your Strands
(To the tune of “I Wanna Hold Your Hands”)

Oh yeah, I’ll tell you something
It helps to understand
Pol III de-crees
To meet the cell’s demands
It has to hold the straaaaaands
It’s gotta hold the strands

The key, Pol III
Acts most processively
‘Cuz see, Pol III
Has beta clamping ha-a-a-a-ands
It uses beta’s ba-a-a-a-a-a-ands
To hold onto the strands

As it starts rep-li-CAT-ING a d---N-A
The un-win-DING requires a lone
Helicase
Helicase
Helica-a-a-a-a-a-a-ase!

Pri-mase starts the primer
That Pol I can erase
Pol III takes the primer
And starts the DNAs
It starts the DNA-a-a-a-as
By using RNA

And when a fragment Okazaki - displays
There must be joining
That requires
A ligase
A ligase
A liga-a-a-a-ase

Thanks to all the factors
And all of their ligands
The cell has what matters
To replicate the strands
It replicates the strands
It replicates the strands
It replicates the stra-a-a-a-a-a-a-a-ands
Deoxynucleotides
(To the tune of “Ticket to Ride”)

Tonight I’m feeling quite glad
Because I can say - yeah
My cells are working like mad
To make DNA

2-prime gets de-ox-i-fying
That’s what the enzyme is buy-i-ing
2-prime is deoxified
It’s gone away

They’re making nucleoti-ides
Way down deep and insi-i-ide
Deoxynucleotides
Are on the way

They’re gonna go and make DNA
You gotta know that
They’re gonna do that in me
They’re gonna go and replicate
A polymerase
Is gonna do that for me

Because of structure decrees
In nucleotides, yay
DNA forms in b’s
But not much in a’s

Deoxynucleoti - ides
That’s what the enzyme provi-i-ides
Deoxynucleotides
Are on the way

Deoxynucleotides
Give B-forms
That oxygen’s gone
That oxygen’s gone
That oxygen’s gone

The enzyme’s mechanism’s so sly
It is tactical
Using radical you see
So when it kisses substrate goodbye
It seems magical
In its practical-i-ty

The two prime must be mentioned
In this exercise, yeah
Its one bit of oxygen
Has got to downsize, yeah
Ode to Bicarbonate
(To the tune of “Song Sung Blue”)

H-2-O
Ionizes slowly
You should know
Its behavior wholly

It presides - in cells’ insides - a solvent great
But mix it with an oil and shake it up
You’ll see ‘em separate
See ‘em separate

C-O-2
Made in oxidation
Inside you
Decarboxylation

So divine – when it combines up with the H-2-Os
Bonding together makes bicarbonates
To ease the pH woes

Bicarbonate – can conjugate and take protons out
Restoring a balance inside of the blood
Of this there is no doubt

Thus it’s so
Thanks to bicarb buffer
In blood flow
You don’t have to suffer

Bicarbonate – will conjugate to take the protons out
Restoring a balance inside of the blood
Of this there is no doubt

Protons stow
In the bicarb buffer
Never grow
So you do not suffer
(fade)
Histones
(To the tune of “Meet the Flintstones”)

Histones, tiny histones
Wrap up eukaryotic DNA

Using lysine side chains
They arrange a chromatin array

With them - DNAs of seven feet
Fit in - side the nucleus so sweet

When you use the histones
You have to deal with condensation
And its ablation
Inside your chromosomes

Structural Lullaby
(To the tune of “Brahms Lullaby”)

In your sleep
You can keep
Learning more about sugars
Fischer schemes
Haworth rings
D & L and everything

Hydroxides
Can’t collide
Fav’ring chair over boat form
Spatial guides
Coincide
With the way structures form
My Old Enzymes
(To the tune of “Auld Lang Syne”)

Whene’er my proteins go kaput
If they are past their prime.
The cells will act to soon replace
All of my old enzymes

They know which ones to break apart
Ubiquitin’s the sign
A marker for pro-TE-a-somes
To find the old enzymes

These soon get bound and then cut up
In pieces less than nine
More chopping yields the single ones
Building blocks from old enzymes

So in a way the cell knows well
Of father time it’s true
Amino acids when reused
Turn the old enzymes to new
The Way They Work
(To the tune of “The Way We Were”)

Enzymes
Mighty powerhouse peptides
Cause reactions to go faster
In the cell’s insides

Tiny substrates
Bring about an induced fit
Enzyme structure is affected
By what binds to it

Can it be that it’s just simple zen?
How the enzymes activate
If they bind effector, will they go
To an R-State, T-State?

Folding
Gives the mechanistic might
To three-D arrangement
Of the active site

*Enzymes
Have a bias they can’t hide
Hydrophobic side chains are
Mostly found inside

So it’s the structure
For celebrating
Whenever there’s debating
The way they work
The way they work

*An extra stanza compared to the original song
Oh Little Protein Molecule
(To the tune of “Oh Little Town of Bethlehem”)

Oh little protein molecule
You’re lovely and serene
With twenty zwitterions like
Cysteine and alanine

A folded enzyme’s active
And starts to catalyze
When activators bind into
The allosteric sites

Your secondary structure
Has pitches and repeats
Arranged in alpha helices
And beta pleated sheets

Some other mechanisms
Control the enzyme rates
By regulating synthesis
And placement of phosphates

The Ramachandran plots are
Predictions made to try
To tell the structures you can have
For angles phi and psi

And all the regulation
That’s found inside of cells
Reminds the students learning it
Of pathways straight from hell

And tertiary structure
Gives polypeptides zing
Because of magic that occurs
In protein fol-ding

So here’s how to remember
The phosphate strategies
They turn the *GPb’s to a’s
And **GSa’s to b’s

*GP - glycogen phosphorylase

**GS = glycogen synthase
Fatty Acids in Our Cells
(To the tune of “Halls of Montezuma”)

From the fatty acids in our cells
   To the lipids in our brains
We are made of biochemicals
   Built in metabolic chains

   Using glycolytic ATP
      And electron energy
We can synthesize most everything
   With the help of Delta G

A cell will tend to pump out sodium
   But potassium it imports
It accomplishes this magic with
   ATPase antiports

   Our bilayer lipid membranes
      Protect the cells’ insides
Partly made of sphingolipids
   We know as gangliosides

   When it comes to regulation
The little cell has got it made
   It phosphorylates a lot of things
      With its own kinase cascade

   Stimulated at a hormone site
      Metabolic yang and yin
That’s turned on by epinephrine
   And turned off by insulin
Energy
(To the tune of “**Let It Be**”)

When I was walking through the forest
Grizzly bears came after me
So I was badly needing
En-er-gy

My body dumped some epinephrine
Out into the blood for me
‘Cause I was badly needing
En-er-gy

En-er-gy / En-er-gy
En-er-gy / En-er-gy
I was badly needing
En-er-gy

The epinephrine gave a kick to
Enzymes deep inside of me
To make a bunch of cyclic AMP

And when this hit my protein kinase
Catalytic ecstasy
The C subunits started
Adding P’s

Adding P’s, adding P’s
Adding P’s, adding P’s
Phosphorylation city
Adding P’s

The protein kinase put a phosphate
Onto PBK for me
Using energy from ATP

And PBK in turn provided
GPa from GPb
So I released a ton of G1P

G1P / energy
G1P / energy
California needs some G1P

And when the chaos had subsided
I consumed some Frito Lays
Which soon began reversing these pathways

The glucose halted epinephrine
Insulin began the race to
Turn on Phosphoprotein Phosphatase
Phosphatase - cleaves the P’s
Phosphatase - cleaves the P’s
The dephosphorylation
Cleaves the P’s

And so they were removed from action
Cellular kinases
Thanks to Phosphoprotein Phosphatase
I’ll end my story here before I
Get depressed from one last fact
That dephosphorylation
Favors fat
Favors fat, favors fat
Favors fat, favors fat
Dephosphorylation favors fat

Energy
(To the tune of “**Let It Be**”)

When I was walking through the forest
Grizzly bears came after me
So I was badly needing
En-er-gy

My body dumped some epinephrine
Out into the blood for me
‘Cause I was badly needing
En-er-gy

En-er-gy / En-er-gy
En-er-gy / En-er-gy
I was badly needing
En-er-gy

The epinephrine gave a kick to
Enzymes deep inside of me
To make a bunch of cyclic AMP

And when this hit my protein kinase
Catalytic ecstasy
The C subunits started
Adding P’s

Adding P’s, adding P’s
Adding P’s, adding P’s
Phosphorylation city
Adding P’s

The protein kinase put a phosphate
Onto PBK for me
Using energy from ATP

And PBK in turn provided
GPa from GPb
So I released a ton of G1P

G1P / energy
G1P / energy
California needs some G1P

And when the chaos had subsided
I consumed some Frito Lays
Which soon began reversing these pathways

The glucose halted epinephrine
Insulin began the race to
Turn on Phosphoprotein Phosphatase
Phosphatase - cleaves the P’s
Phosphatase - cleaves the P’s
The dephosphorylation
Cleaves the P’s

And so they were removed from action
Cellular kinases
Thanks to Phosphoprotein Phosphatase
I’ll end my story here before I
Get depressed from one last fact
That dephosphorylation
Favors fat
Favors fat, favors fat
Favors fat, favors fat
Dephosphorylation favors fat
We All Need Just a Little ATP
(To the tune of “Yellow Submarine”)

In the cells, inside of us, there’s a sugar on adenine
Which is linked, to phosphate groups, and you know it as ATP

If we build up a lot of ATP, we’ve too much energy, metabolically
If we build up a lot of ATP, we’ve too much energy, metabolically

And the cellular decree, calls for storing up the energy
So we save, it chemically, building acids onto ACP

Making fat stores a lot of energy, creates NADP, and uses ATP
Making fat stores a lot of energy, creates NADP, and uses ATP

When we need, some energy, we burn fats in fancy cell machines
Acids all, get shuttled in, on the backs of little carnitines

We break acids every hour today, in mitochnodri-ay, to acetyl-CoA
We break acids every hour today, in mitochnodri-ay, to acetyl-CoA

One more thing, about this tune, should be remembered by, all of you
Burning fat, converts a few, FADs to FADH2s

NADH is a product too, that you can surely use, when NAD’s reduced
NADH is a product too, that you can surely use, when NAD’s reduced
I’m a Little Mitochondrion
(To the tune of “I’m a Lumberjack”)

Oh I’m a little mitochondrion
Who gives you energy
I use my proton gradient
To make the ATPs

He’s a little mitochondrion
Who gives us energy
He uses proton gradients
To make some ATPs

Electrons flow through Complex II
To traffic cop Co-Q
Whenever they arrive there in
An FADH-two

Electrons flow through Complex II
To traffic cop Co-Q
Whenever they arrive there in
An FADH-two

Yes tightly coupled is my state
Unless I get a hole
Created in my membrane by
Some di-ni-tro-phe-nol

Yes tightly coupled is his state
Unless he gets a hole
Created in his membrane by
Some di-ni-tro-phenol

Both rotenone and cyanide
Stop my electron flow
And halt the calculation of
My “P” to “O” ratio

Both rotenone and cyanide
Stop his electron flow
And halt the calculation of
His “P” to “O” ratio

Oh I’m a little mitochondrion
Who gives you energy
I use my proton gradient
To make the ATPs

He’s a little mitochondrion
Who gives us energy
He uses proton gradients
To make some ATPs

Electrons flow through Complex II
To traffic cop Co-Q
Whenever they arrive there in
An FADH-two

Electrons flow through Complex II
To traffic cop Co-Q
Whenever they arrive there in
An FADH-two

Yes tightly coupled is my state
Unless I get a hole
Created in my membrane by
Some di-ni-tro-phe-nol

Yes tightly coupled is his state
Unless he gets a hole
Created in his membrane by
Some di-ni-tro-phenol

Both rotenone and cyanide
Stop my electron flow
And halt the calculation of
My “P” to “O” ratio

Both rotenone and cyanide
Stop his electron flow
And halt the calculation of
His “P” to “O” ratio
Don’t Get the Bends
(To the tune of “You’ve Got a Friend”)

When you’re deeply diving
Don’t forget the ni-tro-gen
That’s dissolved way down in your bloodstream yeah
Come up slow adjusting or it will bubble out
Creating some pain you can do without

When you rise from below
You should know you gotta go slow
Don’t be racing to surface again

Summer, fall, winter, or spring
Decompression’s not a fun thing

I can tell you yeah yeah yeah
Don’t get the bends

Yes it’s good to know - so - you
Don’t get the bends

Don’t get the bends
(fade)
If you want to have a lot of energy (En-er-gy)
You had better make a lot of ATP (A-T-P)
I will only tell you once
You need proton gradients
And a bunch of starting stuff like ADP (A-D-P)

If you hanker for a sweet thing you can taste (You can taste)
And your Atkins diet book has been misplaced (been misplaced)
You should know adrenalin
Is an aid to getting thin
Putting phosphates onto enzymes trims your waist (trims your waist)

If you’re feeling kind of achy in your ways (in your ways)
And that hangover has hung around for days (‘round for days)
You should know you silly dear
Pain does not come from your beer
Prostaglandin’s made by PGH synthase (H synthase)

There are acids in the bile that make up gall (make up gall)
Which emulsify triacylglycerol (glycerol)
If your health is gone to hell
You should blame the LDLs
‘Cause they carry all of that cholesterol (lesterol??)

Some phosphates and a sugar on a base (on a base)
Make up C’s and G’s and U’s or T’s and A’s (T’s and A’s)
You can make a DNA
Or a strand of RNA
If you add a template and polymerase (lymerase??)

If you want to ace this test with utmost ease (utmost ease)
You don’t really have to get down on your knees (on your knees)
And you need not say a prayer
So please don’t pull out your hair
Just go download QuickTimes or the MP3s (MP3s)
BB Wonderland
(To the tune of “Winter Wonderland”)

Milam Hall - It’s 12:30
And Ahern’s gettin’ wordy

He walks to and fro’
While not talkin’ slow
Givin’ it to B-B-4-5-0

I was happy when the term got started
Lecture notes and videos galore
MP3s got added to my iPod
But recitations sometimes were a bore

And exams bit me roughly
When the curve turned out ugly

I don’t think it’s so
My scores are too low
Slidin’ by in B-B-4-5-0

Final-LY there’s an examination
On December 9th at 6:00 pm
I’ll have my card packed with information
So I don’t have to memorize it then

And I’ll feel like a smarty
With my jam-packed note-cardy
Just one more to go
And then ho-ho-ho
I’ll be done with B-B-4-5-0
This Song’s for BB 350

(To the tune of “This Land is Your Land”)

It’s one o’clock and
Ahern’s talkin’
Henderson and
Hasselbalch and
pKa’s and
Buffers I should know
This song’s for BB three five oh

I’m feeling manic
I’m in a panic
I’d better study
My old organic
It has reactions
That I need to know
This song’s for BB three five oh

I know he said it
That’s why I dread it
‘cause I skipped Friday’s
Extra credit
‘twil pro’bly haunt me
That lowly ze-ro
Grade in BB three five oh

It could be steric
Or esoteric
That carbons get so
Anomeric
I’m too hysteric
Better let it go
This song’s for BB three five oh

I hope that maybe
He’ll think the way we
Wrote our answers
Wasn’t crazy
I really need the
Partial credit - so
This song’s for BB three five oh

It’s really groovy
That it improves me
Watching lectures
In Quicktime movies
I really need to
Go and download those
Podcasts for BB three five oh

This Song’s for BB 350
(To the tune of “This Land is Your Land”)

It’s one o’clock and
Ahern’s talkin’
Henderson and
Hasselbalch and
pKa’s and
Buffers I should know
This song’s for BB three five oh

I’m feeling manic
I’m in a panic
I’d better study
My old organic
It has reactions
That I need to know
This song’s for BB three five oh

I know he said it
That’s why I dread it
‘cause I skipped Friday’s
Extra credit
‘twil pro’bly haunt me
That lowly ze-ro
Grade in BB three five oh

It could be steric
Or esoteric
That carbons get so
Anomeric
I’m too hysteric
Better let it go
This song’s for BB three five oh

I hope that maybe
He’ll think the way we
Wrote our answers
Wasn’t crazy
I really need the
Partial credit - so
This song’s for BB three five oh

It’s really groovy
That it improves me
Watching lectures
In Quicktime movies
I really need to
Go and download those
Podcasts for BB three five oh
My ‘A’
(To the tune of “My Way”)

And now, the course is done
Except for all that final testing
Dear friends, let’s have some fun
There surely won’t be much protesting

We’ve had a busy term
Addressing all the content swiftly
And so I sit and squirm
B-B three fif-ty

Exams, there’s been a few
Our averages were somewhat lower
The grades are all askew
I wish that Ahern would go slower

I studied hard each time
And even though my grades were iffy
Oh no, I did not whine
B-B three fif-ty

Yes it was tough
You knew it too
I memorized
My knowledge grew
And through it all
I did not frown
I thought it up
And wrote it down
I fought the fight

I hope it’s right
B-B three fif-ty
I laughed, I cried, I swore
Just as I did here on the first day
But since, the term is o’er
Let’s all go out for thirsty Thursday

I guess I have to face
The fact that I am not a swifty
But oh, I need to ace
B-B three fif-ty

The end arrives
Our grades are out
As I log in
To my account
I say some things
I truly feel
I hope I don’t
Have to appeal
There’s no dismay
I made my ‘A’
B-B three fif-ty

My ‘A’
(To the tune of “My Way”)
The Mellow Woes of Testing
(To the tune of “Yellow Rose of Texas”)

The term is almost at an end
Ten weeks since it began
I worried how my grade was ‘cause
I did not have a plan
The first exam went not so well
I got a fifty three
‘Twas just about the average score
In Biochemistry

I buckled down the second time
Did not sow my wild oats
I downloaded the videos
And took a ton of notes
I learned about free energy
And Delta Gee Naught Prime
My score increased by seven points
A C-plus grade was mine

I sang the songs, I memorized
I played the mp3s
I learned the citrate cycle
And I counted ATPs
I had electron transport down
And all of complex vee
I gasped when I saw my exam
It was a ninety three

So heading to the final stretch
I crammed my memory
And came to class on sunny days
For quizzing comedy
I packed a card with info and
My brain almost burned out
‘Twas much to my delight I
Got the ‘A’ I’d dreamed about

So here’s the moral of the song
It doesn’t pay to stew
If scores are not quite what you want
And you don’t have a clue
The answers get into your head
When you know what to do
Watch videos, read highlights and
Review, review, review

The Mellow Woes of Testing
(To the tune of “Yellow Rose of Texas”)

The term is almost at an end
Ten weeks since it began
I worried how my grade was ‘cause
I did not have a plan
The first exam went not so well
I got a fifty three
‘Twas just about the average score
In Biochemistry

I buckled down the second time
Did not sow my wild oats
I downloaded the videos
And took a ton of notes
I learned about free energy
And Delta Gee Naught Prime
My score increased by seven points
A C-plus grade was mine

I sang the songs, I memorized
I played the mp3s
I learned the citrate cycle
And I counted ATPs
I had electron transport down
And all of complex vee
I gasped when I saw my exam
It was a ninety three

So heading to the final stretch
I crammed my memory
And came to class on sunny days
For quizzing comedy
I packed a card with info and
My brain almost burned out
‘Twas much to my delight I
Got the ‘A’ I’d dreamed about

So here’s the moral of the song
It doesn’t pay to stew
If scores are not quite what you want
And you don’t have a clue
The answers get into your head
When you know what to do
Watch videos, read highlights and
Review, review, review
Biochemistry, Biochemistry
(To the tune of “Oh Christmas Tree”)

Biochemistry Biochemistry
I wish that I were wiser
I feel I’m in way o’er my head
I need a new advisor

My courses really shouldn’t be
Such metabolic misery
Biochemistry Biochemistry
I wish that I were wiser

Biochemistry Biochemistry
Reactions make me shiver
They’re in my heart and in my lungs
They’re even in my liver

I promise I would not complain
If I could store them in my brain
Biochemistry Biochemistry
I wish that I were wiser

Biochemistry Biochemistry
I’m truly in a panic
Your mechanisms murder me
I should have learned organic

For all I have to memorize
I ought to win the Nobel Prize.
Biochemistry Biochemistry
I wish that I were wiser
BB You’re the Sh*ts
(To the tune of “Green Acres”)

(Male voice)
450 is the course for me
With all its biochemistry
I soak up what this course provides
Structure and function and info about peptides

(Female voice)
451’s the choice for me
Mo-lec-u-lar biology
I think it truly is risque
Exposing the bases inside of the DNA

Enzymes (Male)
5 primes (Female)
Histones (Male)
The clones (Female)

A battle of wits (Male)
As good as it gets (Female)
Oh BB you’re the sh*ts (Male & Female)
Anthem for BB 350
(To the tune of “She’ll Be Comin’ Round the Mountain”)

Oh the students taking BB 350 - 350
Have an awful lot of things that we must know - 350
   With acetic acid buffer
   Kevin Ahern makes us suffer
The exams could not be tougher 3-5-0 – 350

There’s amino acid side chains to recall - 350
And the things it takes to make cholesterol - 350
   Anabolic catabolic
   Kevin Ahern’s diabolic
I’m becoming alcoholic 3-5-0 -350

There must be a way to jam into my head - 350
All the metabolic enzyme names I dread - 350
   Can you help me learn the spaces
   Where the endonucleases
   Cut the DNA in places 3-5-0 -350

I must find a way to make a better grade
Or my GPA will truly get waylaid
   I shall overcome frustration
   To achieve my aspiration
On the last examination 3-5-0, 350

Here’s the plan I made to help me to succeed
Fill the notecard with the knowledge I will need
   I’ve put all of Ahern’s quotes
   Along with what each one denotes
Onto a massive stack of notes for 3-5-0, 350

So there’s just one teensy problem I must fix
It requires some very skillful penman tricks
   Squeezing info I must store
   Onto the card he gave before
Will mean a font the size of zero point one four
Things You Should Remember
(To the tune of “In My Life”)

There are things you should remember
When you’re stud-y-ing for this exam
All the pathways since September
And the mol-e-cules comprising them

Though that is an awful lot of information
I hope that you can retain it all
If you do you will avoid a grade deflation
When you-uuu study right, you will recall

Now in all your preparation
There is soooome-thing you should regard
How your brain stores information
So transcribe your notes onto a card

I assure you it will up your recollection
Of enzymes and com-plex Haworth rings
It will drive performance to perfection
Simply from the act of writing things

I assure you it will up your recollection
Of enzymes and com-plex Haworth rings
It will drive performance to perfection
Simply from the act of writing things

So go-ooo forward now and write down things
Brain Farts Just Happen in My Head
(To the tune of “Raindrops Keep Fallin’ on my Head”)

Brain farts just happen in my head
I think it might be due to something Kevin said
Bi-o-che-mis-try
Gets brain farts a poppin’ in my head and they’re poppin’

So I just wiped out the teardrops from my eyes
And told my brain it had to do some men-tal exer-cise
Burn some ATP
So brain farts can stop inside my head they’ll be stoppin’

‘Cause there’s one thing I’ve learned
When energy increases it sure pleases
My mental state - I’m doing great as tension eases

Now brain farts don’t happen in my head
So I’m sure the final will be easier instead
Cyclic AMP
Stops brain farts from poppin’ in my head. They’re not poppin’

Thanks to caffeine
Nothin’s worryin’ me
Student Nightmares
(To the tune of “Norwegian Wood”)

I answered 3 ‘b’.
But then I thought. It might be ‘c’
Or was the false true?
I can’t undo. It makes me blue

It asked me to list all the enzymes that regulate fat
As I wrote them down I discovered I didn’t know Jack

I ought to give thanks,
Scoring some points, filling in blanks
I squirmed in my seat
Feeling the heat, shuffling my feet

Professor then told me there wasn’t a chance I would pass
So I started crying and fell through a big pane of glass

I suffered no harm,
‘Cuz I awoke, to my alarm
Oh nothing compares
To deadly scares, of student nightmares
I Studied So Hard Last Night
(To the tune of “I Saw Her Again Last Night”)

I studied so hard last night
But you know that I couldn’t
Get all the reactions down right
Oh my brain simply wouldn’t

I made lots of tries
To memorize
But it seemed the more I read the book
I never learned

‘Twas much too complex in my head
And so truly confusing
Like most of the things Ahern said
Awfully tough but amusing

I got so upset
That I would forget
Oh I had to find another way
Or I’d never learn

Bridge

Metabolic Melodies
The pathways I could sing in time
They all put my mind at ease
Using just the power of rhyme
My grades began to climb

I studied so hard last night
Now I’ll never forget it
The Melodies helped get it right
Just the way Kevin said it

I won’t get it wrong
‘Cause I know the songs
And it makes me feel so good to know
I’ve truly learned
Distance Ed
(To the tune of “Mister Ed”)

A course is a source, of course, of course
Of all of the knowledge that we endorse
A major force for better/worse is the campus Distance Ed

It’s true to outsource a college course
There are a few standards to be enforced
The long and short’s we reinforce the campus Distance Ed

Bridge
A classroom class meets every week the same time every day
But Distance Ed is most unique - its flexible schedule’s okay

E-course is a source, of course, of course
Of online assistance for lab reports
You’re not enrolled in an online course?

Then sign up for it!

“You’ll love Distance Ed”
The Battle Hymn of Biochemistry
(To the tune of “The Battle Hymn of the Republic”)

By now you know the story of the respiratory stew
Where the fatty acids get chopped up in units two by two
Their electrons pass through coenzymes referred to here as Q
Electrons flow along

Glory to electron transport
Glory to electron transport
Glory to electron transport
Electrons flow along

Eee - lectron transport complexes are working dusk to dawn
Managing electron energy they just keep passing on
And for handling the energy they get to pump protons
As the gradient marches on

Glory to the proton gradient
Make the mitochondry - radiant
Glory to the proton gradient
The gradient marches on

If you need a lot of energy your cells have got a way
To break fatty acids down to yield some acetyl-CoA
Going on inside peroxisomes and mitochondri “ay”
Fatty acids oxidized

Glory, glory oxidation
It’s the heart of respiration
Learn it without consternation
Fatty acids oxidized

HMG-CoA reductase leads to bits of isoprene
That link up together in the cell to synthesize terpenes
Don’t forget before cholesterol you’ve got to make squalene
As the lipids march along

Glory, glory to the lipids
Glory, glory to the lipids
Glory, glory to the lipids
As the lipids march along

If a bee should come and sting you when you’re sitting in a daze
You had better take some aspirin for PGH synthase
Otherwise arachidonate goes to cyclic path-a-ways
And you’ll start to feel the pain

Oh, don’t make the prostaglandins
Causing pain with great abandon
No, don’t make the prostaglandins
You are going to feel the pain
Thank God There’s a Video
(To the tune of “Thank God I’m a Country Boy”)

There’s a bundle of things a student oughta know
And Ahern’s talk isn’t really very slow
Learnin’ ain’t easy / the lectures kinda blow
Thank God there’s a video

Well we’ve gone through the cycles and their enzymes too
Studying the regulation everything is new
I gotta admit that I haven’t got a clue
What am I gonna do?

So I got me a note card and bought me a Stryer
Got the enzymes down and the names he requires
I hope I can muster up a little more desire
Thank God there’s a video

Just got up to speed about the NAD
Protons moving through Complex Vee
Electrons dance in the cytochrome C
Gotta hear the MP3

Fatty acid oxidation makes the acetyl-CoA
Inside the inner matrix of the mitochondri-ay
It’s very complicated, I guess I gotta say
Thank God there’s a video

So I got me a note card and bought me a Stryer
Got the enzymes down and the names he requires
I hope I can muster up a little more desire
Thank God there’s a video

Replication’s kind of easy in a simple kind of way
Copyin’ the bases in the plasmid DNAs
Gs goes with Cs and Ts go with As
Thanks to polymerase

And the DNA’s a template for the RNA
Helices unwinding at T-A-T-A
Termination happens, then the enzyme goes away
Don’t forget the poly-A

So I got me a note card and bought me a Stryer
Got the enzymes down and the names he requires
I think I can muster up a little more desire
Thank God there’s a video
Online Movie
(To the tune of “Feelin’ Groovy”)

Oh no! I missed my class
Someone ought to kick my ass.
Perhaps there is a hope for me
Did Ahern make an
Online Movie?

Nanananana Online Movie

Doctor Kevin’s
Always blowin’
Tellin’ me I should be knowin’
All that biochemistry
I hope there is a
Online Movie

Nanananana Online Movie

Got sweat on my brow
I’m starting to weep
I fire up my laptop. I’m white as a sheet
As Firefox is downloading I’m feeling neat
‘Cause I just found the
Online Movie

Nanananana Online Movie
This Biochemistry
(To the tune of “My Country ‘Tis of Thee”)

This bi-o-che-mis-try
Will be the death of me
Oh hear my plea

God knows that I have tried
To learn the glycosides
And all the polysaccharides
Oh let me be

Just what makes muscles sing
Is Cori cycling
Here’s how it goes

Hypoxic muscles make
A wad of lactate
The liver acts to generate
Some new glucose

Regulation is a zoo
PFK one and two
And there is more

Instructors make a fuss
With all their kinases
Like Michael Jackson’s trial was
A crashing bore
I Should Have Studied Harder
(To the tune of “I Should Have Known Better”)

I should have studied harder when I had the chance
Instead of just drinking beer at the dance
If I can’t. Pass the class. I’ll be toast

Oh oh I - never dreamed how hard that this course would be
Now I’m hoping just to pull out a ‘D’
Help me please. Help me PLEASE

‘Cause if I do not pass this class - I . . . .knowwwwwwwwwwwwwwwww
That my folks both will kick my aaaaaasssssssss ohhhhhhh
This term I will not gradua -a-a-a-a-te
And I don’t think my job will wait

Ohhhhh I -- screwed it up so bad in the winter term
That there was not a chance that I could learn
I just lit. A bon fire. And got burned

Soooooo I see that I am stuck in an ugly mess
And I know that I cannot guess
My way through. The last test.

Today I’ve realized too la-ate (oh)
That I am master of my faaaaate (oh)
In life you get what you have earned
That take home lesson now I’ll learn
A lesson learned
A lesson learned
A lesson learned
A Course With No Aim
(To the tune of “A Horse With No Name”)

On the first day of the quarter
I was reading the syllabus
It had stuff to learn and things to do
There were tests and quizzes too

The first thing I saw was a quick overhead
A bad . .  trans-parency
The prof was dry and his talk was terse
Many students were absentee

I’ve spent all the quarter in a course with no aim
It’s ridiculous I proclaim
The professor cannot remember my name
And it seems that I just disappeared from his brain
La la la la la, land la la land, la la
La la la la la, land la la land, la la

In the third week, I confirmed my doubt
A pain began in my head
By the fourth week, I had tuned him out
I could not get a thing he said
In the lecture he railed, like he was impaled
Made me want to go back to bed

And so I’ve spent all quarter in a course with no aim
It’s ridiculous I proclaim
The professor cannot remember my name
And it seems that I just disappeared from his brain
La la la la la, land la la land, la la
La la la la la, land la la land, la la

In the last week, I let my mind run free
Cuz of what I had come to see
All the info that’s there inside my brain
Is a challenge to be sustained
Knowledge as a fruit from a seed can arise
That it pays to just help protect
It is a pity if it’s not fertilized
So it’s not something one should neglect

And so I’ll prep for the final with a brand new campaign
Cuz I am changing my old refrain
I don’t care . . . he can’t remember my name
All I care about’s what I do with my brain
La, la, la la la la, la la, la la, la la
La, la, la la la la, la la la la la, la la

(Repeat and fade)
The End of the Term
(To the tune of “The End of the World”)

Why are these pathways so daunting?
When do the enzymes work best?
I never know. That’s the way that it goes
Each time I start to take a test

How come my brain goes on standby?
Why are my notes Greek to me?
I’ve gotta learn for my grade to upturn
I need to jolt my memory

I stay up late at nights to do the cramming
And get the info packed in my brain
I don’t comprehend, even though I attend
Oh why is learning such a pain?

Now at the test I am sweating
Struggling to bring up the names
There’s just too much. I may choke in the clutch
Oh how I wish I had two brains
New Teacher Song
(To the tune of “Battle Hymn of the Republic”)

The wisdom we have brought today’s a song that is our first
Please forgive us if it’s rough because it’s really unrehersed
The advice that we are giving you we hope it’s not the worst
Congrats you’re a teacher now

Glory glory adoration
Children get an education
Watching many simulations
You are going to show them how

When you start to teach them anything you have to just explain
Everything that goes inside their tiny adolescent brains
Even though you do your best to help them they may still complain
Here’s the way to get along

Get your vocal cords on ready
Practice ‘til your pitch is steady
Use some rhymes but don’t be petty
Win them over with a song
The Bad Instructor’s Anthem
(To the tune of “Star Spangled Banner”)

I say did you see
Posts on Blackboard from me?
Where the verbiage I used
Led you all to be confused

Those instructions I say
Were not meant to convey
Any meaning of note
And they’re nothing you should quote

The assignments you write
Due at dawn’s ear-ly light
Should never possess
Any errors nonetheless

Yes Blackboard gives me ways of
Mys-ti-fy-ing all of you-u-u
And that pain you’re feeling now
Is just me a-turnin’ screws

The Colonoscopy Song
(To the tune of “Oh Christmas Tree”)

Colonoscopy, colonoscopy
I like the magic you do
They’re gonna stick a camera in
The place where I go poo poo

My system’s on a binge of late
Irregularity’s not great
Colonoscopy, colonoscopy
I hope you fix my poo-poo
National Merit Scholars
(To the tune of “Rudolph the Red-Nosed Reindeer”)

National merit scholars
Visiting at OSU
Checking our programs out and
Seeing if we fit for you

With eighty seven majors
Discipline diversity
For every kind of student
Seeking relevant degrees

URSA helps you do research
Starting freshman year
Scholarships can pave the way
So join OSU today

Be part of Beaver Nation
Help discover new breakthroughs
Land, sea, and space and sun grants
Only here at OSU
Students Rejoice!
(To the tune of “Joy to the World”)

Students rejoice.
The end is near
For bi-o-chem-is-try
No metabolic pathways,
No enzymes we must know
And Ahern cannot sing
He really should not sing
Let’s hope that in winter term he does not sing

Oh Daddy Dear
(To the tune of “Oh Danny Boy”)

Oh Daddy dear, this is my biochemistry
The problems long. The course is really tough
That last exam, it really put the fear in me
I studied lots. I hope it was enough

But let’s forget about it while you’re visiting
And bong a beer when we get out of class
Then when you’re gone I’ll go back to my studying
That Kevin Ahern really truly is an awesome instructor
OSU Alma Mater Song Revised
(To the tune of “Carry Me Back to OSU”)

Within the city of Corvallis
Is the school of OSU
Its conscientious students
Now we bid adieu

We love remembering so fondly
The work you put into
The cutting edge of academics
Here at O-S-U

Rewind the clock to freshman year
And con-vo-ca-ti-on (con-vo-CAY-SHE-un)
That day we recognized your promise
And had a lot of fun

Move forward now from OSU
Go be a great success
And when Foun-da-tion comes a-calling
We hope you’ll say yes
BB Alma Mater Song  
(To the tune of “Carry Me Back to OSU”)  

You are a group of BB students  
Whom the faculty hold dear  
Your smiling faces prudent  
To us all appear  

We love remembering so fondly  
In room oh-oh-2-3  
Where you spent lots of time pipetting  
Experimentally  

Rewind the clock to freshman year  
And B-B 1-1-1  
You showed you had a ton of promise  
And had a lot of fun  

Move forward now from OSU  
Go be a great success  
And if Foundation comes a-calling  
We hope you’ll say yes
The Ballad of Andy Karplus
(To the tune of “That’s Amore”)

Here in BB it’s in the air
This song concerns a change of chair

He will give up his seat when the chairpersons meet
   An-dy Karplus
‘Cuz he’s finished his term he ignores calls from Sherm
   An-dy Karplus

It was nuts - when the budget cuts - kicked us in the butts
   Now he acts with no peril
Like the crack - Beaver quarterback - gives it to his back
   He hands IT off to Merrill

It’s OK to refuse writing THE year end news
   An-dy Karplus
Doesn’t need to appraise how he gives us TAs
   for the term

He can roll his eyes - when the Dean organizes
   the col-lege
Now he’s back in the pack and we’re happy he’s back
   An-dy Karplus

If the staff’s in revolt he will not feel the jolt
   An-dy Karplus (An-dy Karplus)
And there’s zero remorse over THE challenge course
   An-dy Karplus (An-dy Karplus)

No one brings - petty little things - venting of their spleens
   To command his attention
He just grins - when the term begins - bureaucratic spins
   Will not cause hypertension (hypertension)

If there IS gloom or doom and the source is the Bloom
   Andy Karplus (Andy Karplus)
He can take a back seat as his work is complete that’s for sure

(slowly) And can say “Golly shucks. That most certainly sucks”
   with comPOSure
Filled with glee he’s now free acting SAB-bat-ic-ly
   Andy Karplus
The LPSC Song
(To the tune of “Wabash Cannonball”)

The Pauling Science Center
Will do a lot of good
Like housing Tory Hagen
And Roderick Dashwood
There’s Gombart and there’s Traber,
There’s Stevens and there’s Ho
Upcoming’s Viviana
And lots of naked moles

They’ve shown we CAN live longer
Our lives will be enhanced
By taking micronutrients
And anti-oxi-“dance”
Wé’ll have a strengthened blood flow
And healthy kids to boot
From work that’s going on inside
The Pauling Institute

The Chemistry Department
Will get a brand new space
By moving out of Gilbert
Into this fancy place
Blakemore, Carter, Beaudry
The carbon-focused three
And don’t forget Vince Remcho’s
Work in nano-chemistry

The building’s named to recognize
The famous scientist
Whose Nobel prizes both were earned
Alone without assist
So here’s to Linus Pauling
It’s of him that we declare
Our number one alumnus
With a lot of room to spare
They’re Number One
(To the tune of “Here Comes the Sun”)

They’re number one
They’re number one
It looks like
They’re all right

Benny Beaver
Has waited for the end of winter
In Corvallis
The boys of spring are great it’s clear

They’re scoring runs
They’re number one
And we say
They are great

Beaver baseball
Is such a champion breeding ground
Mike Conforto
So good at bringing runs around

They’re number one
Our number one, it feels great
They’re first rate

One, one, one, number one
One, one, one, number one
One, one, one, number one
One, one, one, number one
One, one, one, number one

Beaver baseball
They’re getting ready for the BIG show
N-C-A-A
The Beaves are back and set to go

They’re number one
Our number one and we say
They’re all right

You’re number one
You’re number one
You’re all right

You’re all right
Thank You, Mary Ann
(To the tune of “Those Were The Days, My Friend”)

Several years ago in Oklahoma
A girl was born in OKC one day
Ever since she was an embryoma
Adventurousness and fun were her fortes

This is the story of
That lady filled with love
Both for her husband
And her children too
Who’ve gone to great success
Mandy and Nicolas
Mary Ann Matzke hold on, we’re not through

Origins in Perry, Oklahoma
Where Timothy McVeigh was later caught
An Oklahoma State B.S. diploma
Along with that new guy you found so hot

Oh Gordon Matzke you
Showed her a thing or two
During the time you spent in Africa
She did not get unnerved
At Selous Game Reserve
Where spitting cobras made up the fauNA

Then in the year of one nine seven seven
The Matzkes were uprooted every one
Moving out to a Northwestern heaven
They settled in Corvallis, Oregon

Then next the big game plan
In store for Mary Ann
Was getting work at a new OSU
She started musically
As part-time secret’ry
And then advising Science, Business too

Fast-forward fifteen years from when she started
Richard Thies had done his job with Fred
She leaped into the challenges whole hearted
In working as the new advising head

It went down very well
As everyone can tell
Who’s standing here to honor her today
The students too were pleased
She helped with their degrees
Oh Mary Ann please don’t go far away

We wish you all the best in your endeavors
Please know for sure you’ll never be forgot
So go enjoy your favorites forever
Green beans, lattes, and mucho “cho-co-lott”

And so now Mary Ann
This ends what you began
A journey long, but satisfying too
Science is better cuz
You worked with all of us
So take these thanks from both your OSUs
BB Office Battle Hymn
(To the tune of “Battle Hymn of the Republic”)

All the visitors who climb the stairs in ALS can see
Smiling faces when they come to visit biochemistry
There is Barbara, there is Lisa, and Jill Wait is number three
   They’re the BB office staff
   Glory to the office staff who
   Help us do our work and laugh too
   Serving Karplus, Ho and Mathews
   They’re the BB office staff

Right up front is Barbara Hanson who makes popcorn every week
Students hand their time cards in to her on every month’s fifteenth
   Barbara’s just the one to turn to if the toner’s getting weak
   She has got the magic touch
   Glory, glory Barbara Hanson
   Typing letters with abandon
   Always has the upper hand an’
   Thank you Barbara very much

Just behind her sits our bookkeeper whose name you know is Jill
She can balance the accounts and statements as she pays our bills
   And for every effort made she demonstrates the utmost skills
   There is no need for debate
   Jill’s the food drive’s major booster
   Payables do not confuse her
   Plus she takes care of a rooster
   Thank you very much Jill Wait

As for managing the operation Lisa is devine
Even though she’s only in the office point five of her time
Her predictions of the weather are uncanny and sublime
   Yes she makes a great forecast
   Lisa manages the corps
Now that Walsh is here no more
   Wins the Squirrels final four
   Lisa cannot be surpassed
A Song for Barbara H.
(To the tune of “She’ll Be Coming ‘Round the Mountain”)

Oh there’s gonna be a BB office change (Barbara H)
Stepping in the BB office will be strange (Barbara H)
    Cuz the person usually sitting
At the front desk now is splitting
So a song is most befitting Barbara H (Barbara H)

Working here since nineteen hundred eighty three (Barbara H)
Twenty nine years serving biochemistry (Barbara H)
    It is good you understand
    Just what the copier demands
And thanks for passing out exams dear Barbara H (Barbara H)

Something special happens Wednesday afternoon (Barbara H)
When your cooking makes those tasty popcorn fumes (Barbara H)
    And you go the extra mile
    You are very versatile
Handle – ing the many files Barbara H (Barbara H)

BB seminar refreshments truly please (Barbara H)
New grad students taste your yummy recipes (Barbara H)
    And you really earn the praise
From everyone here for the ways
Of celebrating our birthdays here Barbara H (Barbara H)

There is just another thought before we close (Barbara H)
You won’t have to drive in anytime it snows (Barbara H)
    For the very final issue
We may need a bit of tissue
Cuz we certainly will miss you Barbara H (Barbara H)
The Food Fight
(To the tune of “She’ll Be Comin’ Round the Mountain”)

It was in the Old World Deli Friday night
That one hundred people gathered for a bite
    Mary Fulton made us able
    To sit down at twenty tables
Where we had a most unusual food fight

Silent auctions started off the evening’s biz
    Fifteen teams participated in a quiz
    Raffles had everyone blabbin’
    ‘Bout a weekend at a cabin
Thank the Mathews and the Kents for all of this

Connie Bozarth / Karen Karplus we agree
    Ran the silent auction most outstandingly
    And we thank for the quiz wordin’
    Hallet, Atkinson, and Jordan
Andrew Schwartz excelled at being the emcee

As the evening moved along it soon became
    Time to play a very funny guessing game
    All the room was full of guessers
    Speculating ‘bout professors
Dr. Sarker / Thi Nguyen deserve acclaim

At the termination of the night’s affair
    Every person who attended was aware
    It was time to stand and holler
We cleared sixteen hundred dollars
Or eight thousand pounds of grub for the Food Share
You’re Turning Fifty
(To the tune of “My Way”)

And now . . . . the day is here;
You have to face . . . . the big pronouncement
Dear friend . . . . let’s make it clear,
There’s no esca . . . . ping Barb’s announcement

She prints . . . . them up each morn
And posts them on . . . . the office doorway
There’s no . . . . escaping no -
-ting Andy’s birthday

Regrets . . . . you’ve had a few;
But most of them . . . . are fleeting
Except . . . . the ones that come
While sitting in . . . . a chairmen’s meeting

For then . . . . the clock ticks slow
When Bloomer says . . . . you must be thrifty,
But nev . . . ermind it now
You’re turning fif . . . . ty

Yes, there are times . . . . we know you know
The work is hard . . . . the pay too low
And through it all . . . . you persevered,
We lost Shing Ho . . . . who disappeared
You lead us now . . . . so we avow
Congrats you’re fifty!!!!!!!
Algae
(To the tune of “Alfie”)

What is in the grout?
Algae
Are you living or simply a stain?
Why’re you in the grout that I’m cleaning up, algae?
Are you there just to mock me again?
Oh you sure mess with my mind

Cuz I’m really not so blind
Algae
When you dirty what I have to clean
As you grow inside all the cracks supplied, algae
Why are you bent to torment me with green?

I’m certain there must be a reason you exist, algae
Some food perhaps or a fuel
But beware of bathroom cleaners when we’re cleanin’

I am using bleach
Algae
Without this stuff you might exist, algae!
And that would leave me truly pissed, for certain, algae!

Now you’re gone far away I assume
No longer in my bathroom
Algae, algae
Kidney Stone
(To the tune of “Take Me Home, Country Roads”)

Early morning
In the bedroom
Doin’ yoga
When I felt the twinge
That’s a new one
Is it some disease?
Back behind the liver
Stabbing my kidneys

Kidney stone
I bemoan
That it has
Ever grown
Tiny blockage
Monster problem
From my own
Kidney stone

Kidney stone
Makes me groan
On my knees
Then I’m prone
“Help me someone
Get a doctor”
This I moan
Kidney stone

And then the doctor says some words
that roll off sweetly
Prescription drugs will help until this
thing moves out of me
The wonderful narcotics put the pain
away ‘til it can go and pass itself
urethrally, urethrally.

Kidney stone
Overgrown
Now I stand
At the throne
Hope to catch it
With a strainer
For my lone
Kidney stone

At the clinic
Think I’m dying
Forms are filled out
Life before my eyes
Almost lose it
Saying my goodbyes
Could it just stop hurting?
What would he advise?
The Walgreens Song
(To the tune of “If I Fell”)

When my LDLs are high
And the doc is saying I
Must change my diet or
I could have a heart attack
I do not stop eating snacks
I take lipitor

Oh I need to start
To cope
With my routine
But I haven’t got
A hope
Without my Walgreen’s store

When I’m getting Ay-Dee-Dee
And feeling bad
I succumb and then
Proceed
To take an adder-all

‘Cuz your pharmaceuticals
Help me
To adapt to each impulse
In my brain

So I hang out at
Walgreens
A frequent buyer
It’s a com-mon theme
I’m preaching to the choir
Cuz it’s planted in our brains
That we
Need a pill for everything
Every day

I am hypnotized
Walgreens
By all your potions
Set me free
Oh please
Just give me my release
So I CAN be more at peace
The Ointment Song
(To the tune of “My Valentine”)

I went outside
To have a smoke
Out by the fence I brushed against some poison oak
On my behind
So I took a shine
To Calamine

It didn’t work
That was a bitch
Things got so bad I didn’t think I’d stop the itch
To ease the pain
I tried again
With lanacaine

And I discovered
Re-lief
But the effect was only
Ver-y brief
So then I thought I’d
Try something new
Remove the toxin
With some TecNu

It really worked
No scratching fits
I cannot tell you how much rashes are the pits
I’m feeling strong
Let’s sing along
This ointment song

Instrumental

Now if I itch
I worry not
I go and grab the magic ointment that I’ve got
A big thank you
For magic goo
They call TecNu
Prostate!
(To the tune of “YMCA”)

PROSTATE!
Swollen in my inside
I say PROSTATE!
To you I can confide
That my PROSTATE!
It will not be denied
I must go-see-the-doc-tor

PROSTATE!
You had better behave
I say PROSTATE!
For this I must be brave
Or my PROSTATE!
Will lead me to my grave
And that would-not-be-so pru-dent

PROSTATE!
Makes me have to disrobe
At the CLINIC!
For a digital probe
I’m a CYNIC!
I think I will explode
If he pokes-too-much-deep-er

I have got such a high P-S-A!
I had better not wait or delay
‘Cause no matter the pain
It is not all in vain
As urologists ascertain

PROSTATE!
It’s all because of a high P-S-A!
That I’m wracked with such full
blown dismay
It’s an annual screen
That can make you turn green
And what’s more it is most obscene

I have got such a high P-S-A!
I had better not wait or delay
‘Cause no matter the pain
It is not all in vain
As urologists ascertain

So thanks to having a high P-S-A!
I’ve gotta get checked out today
I can truly confirm
The exam makes me squirm
So much hassle for having sperm

Fade out

I have got such a high P-S-A!
I had better not wait or delay
‘Cause no matter the pain
It is not all in vain
As urologists ascertain
Viagra
(To the tune of “Maria” from West Side Story)

Viagra
The most mind-blowing stuff I’ve ever used

I take it at bedtime Viagra, Viagra
Oh this drug is so good I’m worried I may get bruised

It comes in a bottle Viagra, Viagra
Viagra, Viagra, Viagra

Viagra!
I just took a dose of Viagra
And every time I sup
My outlook’s looking up
You see

Viagra!
My love life improves with Viagra
In thirty minutes plus
No work or sweat or fuss
For me

Viagra!
I take it when I have deep down urges
Then rejoice for the thing that emerges
Viagra
I’ll never stop loving Viagra

The most powerful drug I’ve ever used
Viagraaaaaaaaaaaaaaaaaaa
Heavin’ on a Jet Plane
(To the tune of “Leavin’ on a Jet Plane”)

Tray table’s down. I want a snack
The steward brings it in a sack
When suddenly it gets all turbulent
We move up and down and left and right
I’m thinking now that I just might
Have a sudden mid-air accident

Please turn off that seat belt sign
I hope there’s no bathroom line
Where’s that airsick bag
I need it cuz
I’m heavin’ on a jet plane
So where is that damn bag again?
Oh God I hate this so

As the movie played, I felt quite good
I joked I’m ill then knocked on wood
I’m wishing now I’d never tempted fate
Every bump we hit, I get a burp
With just one more, I think I’ll urp
At least it’s one way I could drop some weight

Please turn off that seat belt sign
I hope there’s no bathroom line
Where’s that airsick bag
I need it cuz
I’m heavin’ on a jet plane
So where is that damn bag again?
Oh God I hate this so

No more of that sinking feeling
For I am now dramamine - ing
Swallow hard. Relief is on its way
Dreaming of just having fun
Right after this flight is all done
A time when I will never have to say

Please turn off that seat belt sign
I hope there’s no bathroom line
Where’s that airsick bag
I need it cuz
I’m heavin’ on a jet plane
So where is that damn bag again?
Oh God I hate this so

I’m heavin’ on a jet plane
So where is that damn bag again?
Oh God I hate this so

I’m heavin’ on a jet plane
So where is that damn bag again?
Oh God I hate this so

(Fade)
Health Care is Coming
(To the tune of “Morning has Broken”)

Health care is coming. There’s an uprising
Drummers are drumming. It needs to work
Tempers are rising, clinics downsizing
It’s not surprising, there’s a knee jerk

Right wing campaigners. Government frozen
Led by John Boehner, Senator Cruz
Big celebration, endless emotion
No more frustration, tea partiers lose

Others are trying. Much admiration
No more denying, law of the land
Glitches online then, at registration
Things all will work when, it meets demand

Health care is coming. It’s getting nearer
Almost forthcoming, some people say
Praise its survival, now it is clearer
Nearing arrival, in a few days
His Hair Is Everywhere
(To the tune of “Here, There, and Everywhere”)

It falls out from his head
Littering everything there

His
Problem is something like this
Male pattern baldness is
Reason to cry
If you’re a guy
When your scalp starts peeking out

Hair
Dropping out most everywhere
Rogain-ous reasons that cannot be fair
When losing one’s hair.
There’s no way you can prepare

It’s going everywhere
and as it falls out he chants himself a little prayer.
It’s depressing when he finds it everywhere.
Giving him cause for despair

Follicles leaving are such a big deal
It’s so unreal, so if you’re a guy beware

It’s going everywhere
and as it falls out he chants himself a little prayer.
It’s depressing when he finds it everywhere.
Giving him cause for despair

Follicles leaving are such a big deal
It’s so unreal, so if you’re a guy beware

Hair is there and everywhere
His hair is everywhere
New Pain Reliever
(To the tune of “Daydream Believer”)

Oh I get high
From the smoke
Every time you take a toke

When you feel pain I get to feeling glad
Cuz your haze hits my room
Thanks to my brand new vacuum
Now who says everything that sucks is bad

Fix up things that hurt
With a smoking spurt
From your
New pain reliever and then
I’m not so alert

I think I can see
Tiny worlds surrounding me
Each one set up sub-a-tomically

Oh and I wish I could traverse
Every tiny universe
But time is short and space is bending me

Fix up things that hurt
With a smoking spurt
From your
New pain reliever and then
I’m not so alert

Fix up things that hurt
With a smoking spurt
From your
New pain reliever and then
I’m not so alert

Fade
You’ve Gotta Lose That Gut
(To the tune of "You’re Gonna Lose That Girl")

You’ve gotta lost that gut
(You’ve gotta lose that gut)
You’ve gotta lose that gut
(Oh yeah you gotta lose that gut)
You’ve gotta lose that gut
(Yeah, yeah you gotta lose that gut)

If you go eat too much tonight
I think you’re gonna find
(Yes you are gonna find)
That your belt will fit really tight
You’ll grow a big behind
(You’ll grow a big behind)

You’ve gotta lose that gut
(Oh yeah you gotta lose that gut)
You’ve gotta lose that gut
(Yeah, yeah you gotta lose that gut)

Since you do not eat right, my bro
You always put it on
(You always put it on)
And you’ve been needin’ Sweet’n’low
Your waistline overdrawn
(Your waistline overdrawn)

You’ve gotta lose that gut
(Yes, yes, you’ve gotta lose that gut)
You’ve gotta lost that gut
(Yes, yes, you’ve gotta lose that gut)
You’ve gotta lose (that gut)
(Yes, yes, you’ve gotta lose that gut)

Here is my point
I’m taking food away from you, yeah,
(change what you eat)
The way you scarf it down what can I do?

(You’re gonna lose that gut)
(You’re gonna lose that gut)

You’re gonna lose that gut
(Oh yeah, you’re gonna lost that gut)
You’re gonna shrink that butt
(Oh yeah, you’re gonna shrink that butt)
You’re gonna prance (and strut)
(Oh yeah, you’re gonna prance and strut)

Another point
You need to change the things you do, yeah
(the things you do)
Perhaps you shouldn’t drink all of that brew

If you do not change overnight It’s gonna be a pain
(It’s gonna be a pain)
You should not eat another bite
There’s no one else to blame
(There’s no one else to blame)

You’ve gotta lose that gut
(Yes, yes, you’d better lose that gut)
You’ve gotta lost that gut
(Yes, yes, you’d better lose that gut)
You’ve gotta lose that gut
(Yes, yes, you’d better lose that gut)
I Lost a Lung
(To the tune of “I Left My Heart in San Francisco”)

You’ve gone and left me breathless, so especially today
An absence from my body makes it hard to say
I’m so horribly upset and reminded evermore
I’ll not forget - how you took my breath away

I lost a lung from smoking Camels
Emphysema kills, it seems to me
You see those nicotines and tars
Leave alveolar scars
My raspy throat will often choke,
From the smoke

I’ve no respect for RJ Reynolds
And its cor----por-a-toe-rac-y
Now when I hear the name, RJ Reynolds
I only think malignancy
(She sings)
You went outside and got a chill
And now you’re taking lots of little pills
So my head aches it’s feeling hot
I’m blaming you for all this awful snot

Ray
I caught your cold
I caught your cold

(He sings)
The doc told me to stay in bed
No need to worry. I am feeling dead
My lungs are full. They should be con-demned
Cuz I’m hacking up a mother lode of phlegm

Mae
I got your bug
I got your bug

(She sings)
I caught mono from you dear
And this ringing in my ear
When I get well, you get flu
And though I had shots, I caught it from you

(He sings)
Don’t think a pill will make me smile
Cuz you went out and gave me the West Nile
So sit your little butt right there
And tell me how we’ll pay for this health care

(Both sing)
Say
We’ve got some bugs
We’ve got some bugs

(She sings)
You gave to me step by step
A really bad case of strep

(He sings)
And you shared your allergies
Itchy eyes and then I sneeze

(She sings)
I got you to share my germs
I think we should come to terms

(He sings)
We should do the wedding thing
My love we share everything

(Both sing)
In-oc-U-late (emphasis on the U)
In-oc-U-late
In-oc-U-late
In-oc-U-late
In-oc-U-late
In-oc-U-late
In-oc-U-late

(slow with a climax)
We in-cu-bate
At Dairy Queen
(To the tune of “At Seventeen”)

I saw the light at Dairy Queen
While eating cho-co-late ice cream
That those who crave their sweeties, lad
Develop diabetes bad

The sugared things they sell to you
Seem innocent but it’s not true
They’ll raise your insulin and thus
Cause problems for your pancreas

Bridge
We buy the stuff and never think of
How we’re almost on the brink of
Getting some publicity
For sugar-based toxicity
That’s all because the fast food scene
Is mostly sugar/salt cuisine
We’re bursting at the seams
At Dairy Queen

At Mickey Dees, I order fries
That come to me all super-sized
I eat them up ‘til I am full
Since ketchup is a vegetable

At Taco Bell I must disclose
Tortilla shells have GMOs
And cooking oil unnaturally
Is poisoned so trans-fat-ally

Bridge
Remember this when picking food
Processing can leave you screwed
In colas you will get a dose
Of syrups laced with high fructose
And diet ones are all replete
With chemicals like Nutrasweet
I wonder what it means
At Dairy Queen

It’s no surprise to folks like me
That problems with obesity
Are rooted in the food supplies
Combined with lack of exercise
Of course it makes a lot of sense
To read each package’s contents
Then use the info that it gives
For cutting out preservatives

Bridge
We can kid ourselves, we’ll pay the price
With poor nutritional advice
Imagining ourselves okay
Forgetting how much that we weigh
There’s no ignoring nature’s call
When it comes to cholesterol
No ice cream cone is free
At Dairy Queen
It’s a Toothache Baby  
(To the tune of “It’s Too Late”)

Chewed an ibuprofen  
Oh my my  
Just to kill the pain  
My body is a temple  
My jaw hurts badly  
There can be no doubt  
I don’t like to complain  
All-natural concoctions  
If it doesn’t stop soon  
Are what I’m about  
I think I may go insane  
But this rule goes out the door

It’s a toothache baby  
Now the toothache baby  
Oww it’s decayed  
Is all gone away  
I don’t think that I can abide it  
This ache takes the cake  
I cried all night.  
I don’t think that I can abide it  
Can you kill pain that’s deep inside it?

I never had such focus  
Can you kill pain that’s deep inside it?  
On a single tooth  
Oh yes please, please  
Flossed and brushed that sucker  
I never had such focus  
Since I was just a youth  
Oh I truly love oral surgeons  
But then it got infected  
Their novacaine  
Deep down at the molar roots  
Can drain the pain and

I cried all night.  
I haven’t a-ny a-ver-sions  
Oh I really hope you can numb it  
Oh oh oh  
It’s a toothache baby  
Toothache baby  
Such a major pain  
Novacaine  
Oh I really hope you can numb it  
My molar  
It hurts inside  
It’s decayyyyyyyyyyyed  
I cry and confide  
I’m afraid I will pass out from it  
I’m afraid I will pass out from it
Real Things
(To the tune of “Coke®. It's the Real Thing”)

I’d like to teach my students ‘bout some biochemistry
To keep them all from drinking Coke and make them trans fat free

There’d be no taking creatine to help them run so fast
And Sucralose and Nutrasweet would be things of the past

I’d lower fructose levels in the junk that people eat
And salmon farmed, then colored up I’d work hard to defeat

Organic food is good for you everybody knows
So let’s get rid of factory farms and all the GMOs

Give us real things Some for you, some for me Biochem’s good you see Give us real things
An Inequality
(To the tune of “My Very Good Friend”)

I know wonderful guys within our land
Whose love some folks don’t understand
There’s things they have to both withstand
Because there is - an inequality

Two ladies I know in Kokomo
Have been together high and low
But haven’t got a ring to show
Because you know - of inequality

And there are very many things they can’t do
That others take as simple fact
They just might lose their jobs, it is true
And other things with big impact

But there’s very good news in many towns
The law is turning things around
And this is really quite profound
To rectify - an inequality

Instrumental

And there are very many things they can’t do
That others take as simple fact
They just might lose their jobs, it is true
And other things with big impact

But there’s very good news in many towns
The law is turning things around
And this is really quite profound
To rectify - an inequality
A Gay is No Danger
(To the tune of “Away in a Manger”)

A gay is no danger
To anyone here
Despite what some think
There is nothing to fear

They work at their jobs
And make friends tried and true
Each gay has two parents
Just like me and you

We really must work hard
To fix any flaws
Existing inside of
Our national laws

Remember when hearing
Your own wedding bells
That gays deserve marriage
Like everyone else
Happy Days Are Here for All
(To the tune of “Happy Days Are Here Again”)

Happy days are here for all
Thank the SCOTUS five for standing tall
There’s equality for one and all
Happy days are here for all

Gays can now have wedding days
No matter what the right wing says
We should celebrate without delays
Happy days are here for gays

Bridge
So now we’re on the right track
Let’s all look forward not back

It’s shaping up to be a year
For turning all our backs on fear
No matter if you’re straight or queer
Let’s make bias disappear
With a Little Hemp From My Friends
(To the tune of “With a Little Help From My Friends”)

What would you do if I threw up on you?
Would you really be angry with me?
Roll me some buds and I’ll smoke one or two
And I’ll try not to pass out on thee
Mm, I get by with a little hemp from my friends
I rely on a little hemp from my friends

I am sick from my chemo
You need to give me a joint
‘Cause the feeling’s not primo
I hope you won’t disappoint

What can I do when my nausea’s high?
(I need something to help me to cope)
I know a place that has got some supplies
(Could you go out and snag me some dope?)
Oh I get by with a little hemp from my friends
I rely on a little hemp from my friends

I feel bad medicated
That’s why I’m needing a toke
I hope you’re dedicated
To helping me find a smoke

Would you help me in relieving this pain
‘Cause it happens almost every night
Nothing is free and I hate to complain
Could you please help me out with a light?
Oh I get by with a little hemp from my friends
I can fly with a little hemp from my friends
I rely on a little hemp from my friends

I believe that somebody
Could find the stuff that I need
Give relief for my body
A little bit of a weed

Oh I get by with a little hemp from my friends
Mmmmm, I can fly with a little hemp from my friends
And I get high with a little hemp from my friends
Yes, I rely on a little hemp from my friends
Fishy Tales
(To the tune of “If You’re Happy and You Know It, Clap Your Hands”)
by Indira Rajagopal

There are lots and lots of fishes in the sea
And in rivers and all places watery
They have gills and they have scales
Quite unlike the mighty whales,
Which are mammals, just the same as you and me.

Some fishes like to swim around in schools
In oceans, lakes or even little pools.
They can make a tight-knit team
Like a single silver gleam
As they synch and swim according to the rules.

Reefs are found where water’s shallow, warm and clear
And multicolored fish dart there and here
Where anemones abound
That’s where Nemo can be found
You can see it if you use your scuba gear.

If you’d like to learn a nifty fact or two
Concerning fish and what they like to do
Take your questions in a list
To an ich-thy-ologist
So that you’ll become a fishy expert, too.
The Tidal Pool Song
(To the tune of “Jingle Bells”)
by Indira Rajagopal

Under tidal pools
Sea urchins reside
In the kelp and rocks
Little sculpins hide

Octopi may lurk
In the waters cold
The gulls and oystercatchers find
A snack there I am told

Brittle stars, anemones, hermit crabs galore
Chitons, snails and barnacles by the sandy shore
Arthropods, echinoderms, cnidarians as well
Molluscs, fish and tunicates make every tide pool swell

Walking by the shore
When the tides are low
It can be so fun
Stop and say hello

To your tide pool friends
It is quite a game
When you spot another one
Holler out its name

Brittle stars, anemones, hermit crabs galore
Chitons, snails and barnacles by the sandy shore
Arthropods, echinoderms, cnidarians as well
Molluscs, fish and tunicates make every tide pool swell
Under the Ocean
(To the tune of “Over the Rainbow”)

Way down under the ocean
Manta rays
Swim like
Birds flapping wings
Deep down in the waterways

Urchins, starfish and mussels
In the seas
Sharing
Their living spaces
With sea anemones

The schools of fishes swim along
Beneath the choppy waters in ideal times
The octopus with arms of eight
Can fold them as it lies in wait
To have its meal-time

Seals can play in cold water
Most extreme
Salmon
Grow and await their
Chances to swim upstream

Children always respect the
Sea biomes
We must clean up the messes
As we would our own homes

‘Cuz if we ruin ocean shores
Its life forms will not be there anymore
Swimmin’ Round In Puget Sound
(To the tune of “Yellow Submarine”)

Swimmin’ round in Puget Sound
Are so many things. I have found
Some are green and some are brown
Some of them will even come aground

From the minnows to the eels
To the salmon and the harbor seals
They all live in harmony
In a home that’s so watery

Chorus
They reside in an estuary site
In darkness and in light
On every day and night
They reside in an estuary site
In darkness and in light
On every day and night

There are crabs and there are cod
Baby orcas swimming in a pod
Right inside the waterway

Chorus
They reside in an estuary site
In darkness and in light
On every day and night
They reside in an estuary site
In darkness and in light
On every day and night

You will find them as a rule
Baby fish in elementary schools
(fish in elementary schools)
And there’s many tidal pools
(and there’s many tidal pools)
That’re little estuaries too
(are little estuaries too)

Chorus
Fish reside in their estuary site
In darkness and in light
On every day and night
Fish reside in their estuary site
In darkness and in light
On every day and night

fade
Waking Up is Hard to Do
(To the tune of “Breaking Up is Hard to Do”)

(snore, dreamy, snooze, yawn yawn
karma karma snore, dreamy, snooze, yawn yawn)

Turn the alarm clock down to low
Because my brain is working very slow
It’s going off, a deja vu
Ahhh wakin’ up is hard to do

Last ev’ning when I went to bed
I remember feeling I was dead
It might have been that pack of brew
That’s makin’ wakin’ hard to do

I find that wakin’ up is hard to do
When I get to bed it is two
It (just) can’t be morning again
Instead of getting up I wanna stay right here in bed again

So please don’t make a lot of noise
Because I’ve made myself a cozy choice
The bed is warm, my feet are too
Wakin’ up is hard to do

Yes wakin’ up is hard to do.

[fade] (snore, dreamy, snooze, yawn yawn
karma karma snore, dreamy, snooze, yawn yawn)
I’ve Just Changed My Face
(To the tune of “I’ve Just Seen a Face”)

I’ve just changed my face
I didn’t like the shape or placement of my nose it was a travesty
So I had plastic surgery today
Mmm, mmm, mmm, mmm mmm mmm

Before the stitches get removed
I probably will disapprove
And think of changing something new
No wonder I am always black and blue
Na na na ni ni ni

Reeling, as I am healing
My doc’s concealing
his bill from me

I must have spent twelve thousand bucks
To pay for all my fanny tucks
They’ve poked and sucked the cellulite
And still I feel that something’s not quite right
Mmm, mmm, mmm, mmm mmm mmm

Nutso, I’m such a nutso
Now I think what’s so wrong with my skin?

Perhaps I’ll have it all unpeeled
My inner beauty thus revealed
Will be displayed for all to see
There won’t be anyone who looks like me
La da da da da di

Faking there’s no mistaking
My body’s aching because of me
Faking there’s no mistaking
My body’s aching because of me
Yelp
(To the tune of “Help”)

Yelp
I’m feeling lonely
Yelp
You’re my one and only
Yelp
You know I need you bad
Yelp

When I was walking down the avenue today
I craved brioche but somehow couldn’t find it on my way
But now I’m sitting at a deli on the square
I’m piggin’ out. Without a doubt, brioche is everywhere

Yelp you helped me find the place I’m at
And I’m certainly appreciating that
Yelp you are so good I’m getting fat
Yelp you tru-ly helped me

When I am done and looking for another place
My way of finding things is staring into space
But I get lost so quick and don’t know what to do
I wonder how I ever found these places without you

Yelp where is the shop we’re looking for?
When we’re seeking out the corner grocery store
Yelp you help us build esprit de corps
You must know, oh all things

Before I had you way back ‘fore I got my phone
It surely was a different time if only I had known
There’s one more thing I need to get from you my friend
It is advice about a price what do you recommend?

Yelp you’ve bailed me out again and you’re
An authority who helps me to secure
Everything I’m wanting to procure
I can see things clear-ly
Help me, Yelp me, oooo
Trader Joe’s Tonight
(To the tune of “Strangers in the Night”)

Trader Joe’s tonight . . . is very busy
    Aisles packed rather tight
I’m feeling dizzy. Came to get some Brie
    And soda crackers too

Staring at the chopped . . . packaged selections
    In the cooler by . . . the produce section
Make me think that I
    Should just pick up a few

Trader Joe’s tonight, the yummy sale signs
    Make me exit to the right
To find tortillas
    For fajitas for tonight
It must be alright

Impulse drives my purchases
    Fuel for all my many urges (and)

Every sign they have . . . that shouts zucchini
Make me think that I . . . should make panini
    Clear as black and white
At Trader Joe’s tonight

Impulse drives my purchases
    Fuel for all my many urges (and)

Every sign they have . . . that shouts zucchini
Make me think that I . . . should make panini
    Clear as black and white
At Trader Joe’s tonight
    doobie doobie doo, etc.
I Can’t Charge My Cell
(To the tune of “I’ve Just Seen a Face”)

I can’t charge my cell
I think the battery’s gone to hell
I must have talked too much
And run it down
I cannot dial.
My smile’s turned to a frown
Meh, meh meh, meh, meh meh

I don’t know how this happened cuz
The last time that I checked there was
A couple hundred minutes left
But now it’s dead
And I am effed for sure
Oh, no, no, no, no, no

Balling. I can’t be calling
My phone is stalling
And I am hosed

So now I’m feeling I am hexed
Because I need to send a text
But when I tried the flipping screen
There wasn’t anything that I could see
Oh no no no no no

Battery. What is the mattery?
I’m feeling chattery
And full of woe

Battery. What is the mattery?
I’m feeling chattery
And full of woe

I plan to take a different tack
To get this system back on track
I’ll shock it full of energy
A massive jolt of EE-lectricity
Wow ow ow ow ow ow

Charger. I’ll try a charger
That is much larger
Than I have now.

Charger. A bigger charger
Might make it harder
To run things down.

Charger. System Enlarger
I’m thinking Roger
Over and out
Turn Off That Damn Cell Phone
(To the tune of “The Long and Winding Road”)

Turn off that damn cell phone
‘Cause we’re in a quiet zone
You’ll just disturb the peace
With such a loud ringtone
So please desist and cease
Save it for your home

The last time it went off
You flailed around - in your purse
While searching for the sound
Before it got much worse
Why play this lost and found?
Spare us all the curse

Many times I’ve wondered why
That every time it rings
You act as if it’s talk or die
While dropping everything

So switch to vibrate mode
And do it now - for God’s sake
‘Cause if it blares again
I’ll throw it in the lake
Don’t make me blow my zen
Give us all a break

And last not least avoid
Its use on the - winding road
Your brain should be employed
En route where e’er you go
Don’t make me get annoyed
Focus on the road (yeah, yeah, yeah)
They Are Watching You
(To the tune of “Every Breath You Take”)

They are watching you.
Every thing you sell.
Every wedding bell
Every U-R-L.
Every brand new Dell.

Always watching you.

They are watching you.
Every key you type
Every time you gripe
Every bit of tripe
Coming through the pipes
Always watching you.

They are watching you.
Every dollar spent
When you pay the rent
Every message sent
If you should dissent
Always watching you.

They are watching you.
Every place you dine
Every glass of wine
Each and every time
Where you go online
Always watching you.

They are watching you.
Every DVD
Every MP3
Every COD
To the nth degree
Always watching you.

They are watching you.
Everything preferred
Every new password
Every single nerd
It is so absurd
Always watching you.

They are watching you.
They are watching you.
They are watching you.

(Overlapping words in italic)
I Gotta Go Without Facebook
(To the tune of “I Couldn’t Live Without Your Love”)

Every time I’m entering my login
I need to get it through my noggin
Facebook knows what all my friends are doin’
Only cuz their data it’s been viewin’

Every hour of every day it’s peepin’
At the horde of info it is keepin’
Everything we ever say
Gets reported every day
To the folks at N-S-A

I oughta go without Facebook
There’s a reason that you can guess
Cuz it’s none of their business

Seems I should have known it when I started
All my postings would not get discarded
Though they never charge me for their service
Bigger implications make me nervous

If I go and put up things for viewin’
It’s my privacy that gets a screwin’
When I meet a girl or guy
Everything I ever buy
Any space I occupy

I gotta go without Facebook
There’s a reason that you can guess
Cuz it’s none of their business

Instrumental

So the pictures from my next vacation
Will not be an Internet sensation
I’ll just get them off my phone
And then view them in my home
With my friends when we’re alone

I’ll stick it to the spies at Facebook
Someone oughta tell Congress
That it’s none of their business

I’ll stick it to the spies at Facebook
Someone oughta tell Congress
That it’s none of their business
She’s Staying Home
(To the tune of “She’s Leaving Home”)

Friday evening at eight o’clock
when the shuttle stops
Grabbing her luggage inside the van
Giving a tip to the driver man
She goes in, gets on the escalator
riding upstairs
Carefully lifting her carry on case
She puts it in the right place

She (stays in control of her bags)
is standing (plasters them all with name tags)
there (and shows them her brand new photo ID)
She’s standing there full of angst and despair at
the ticket gate (in line)

Lines are growing as she hands over her check-in bags
Clutching the belt of a carry-on
Staring at lines that go on and on
There’s excess goo in her bag because she has got some shampoo.
More than three ounces illegally
What will they do if they see?

She (watches her bag being scanned)
is waiting (gets pulled aside by a man)
there (goes to a room down the hall with a guy)
She’s left the line for some one-on-one time with
the man in black (bye bye)

Friday evening at midnight she is still out of sight
Missing the boarding hubbub for the plane
Meeting a man from the TSA

She’s (thinking of fun she’d have had)
not having (it makes her feel really bad)
fun (promises never to get on a flight)
She’s changed her mood ‘cause her travel is screwed by security (tonight)
She’s joined the no fly list.
Maybe I’ll Sue
(To the tune of “Baby It’s You”)

Sha la la la la la la
Sha la la la la la la
Sha la la la la la la
Sha la la la la la

It was your platinum card
That caught my eye
You left my ego scarred
And made me cry

Oh no. All those many hours I cried at night
I’m looking out to get revenge out of spite, it is true
I’ve no clue
And no more prospects
So maybe I’ll sue

It’s not good what I think about this
(Bum, bum)
I think you really truly truly truly truly got me pissed
(Bum bum)

But no, it doesn’t matter
What they think
Because the case would raise a
Really big stink
That’s what I’ll do.
Turn the screw.

Ain’t got ambition, it’s true.
So maybe I’ll sue.
(ha ha ha ha)
Maybe I’ll sue
(ha ha ha ha)

But no, it doesn’t matter
What they think
Because the case would raise a
Really big stink
That’s what I’ll do.
Turn the screw.

Ain’t got ambition, it’s true.
So maybe I’ll sue.
(ha ha ha ha)
Maybe I’ll sue
(ha ha ha ha)
All We Need Are Votes
(To the tune of “All You Need is Love”)

Vote Vote Vote
Vote Vote Vote
Vote Vote Vote

There’s something you can do to get it done
Something that is given everyone
One card you can play that will help overcome the greed
So easy

No law that’s been made that can’t be ditched
No one be afraid to tax the rich
One action you can take to let everyone succeed
It’s easy

All we need are votes
All we need are votes
So get out and vote, vote
Votes are all we need

All we need are votes
All we need are votes
Just get out and vote, vote
Votes are all we need

Nothing Congress does is set in stone
No one in this country gets a throne
No amount of bull can make a person untouchable
It’s easy

All we need are votes
All we need are votes
So get out and vote, vote
Votes are what we need

All we need are votes (All together, now!)
Throw the bastards out (Everybody!)
Just get out and vote, vote
Votes are what we need (Votes are all we need)
(Votes are all we need) (Votes are all we need)
(Votes are all we need) (Votes are all we need)
(Votes are all we need) (Votes are all we need)
(Votes are all we need) (Votes are all we need)
fade
Sheik to Sheik
(To the tune of “Cheek to Cheek”)

Fracking
Exxon’s cracking
Every rock that they can find beneath our feet
It’s the cheapest way to riches that they seek
Now our water quality is looking bleak

Drilling
Always drilling
From the Arctic in Alaska as we speak
To despotic places in the Middle East
Where the money changes hands from sheik to sheik

First Bridge (repeated)
Oh they love it when their profits
Have achieved the highest peaks
But they don’t care how they get it so
They move from sheik to sheik

Yes they pump from underwater
Almost every single week
Just avoid the Gulf of Mexico
Should BP spring a leak

Second Bridge
Listen now
They’re grabbing dollars from you
No hollers from you
And finally down in

Texas
Deep in Texas
Where the men are men and women act so meek
And the Bushes and the Cheneys hardly speak
Of the way they’ve made their millions - sheik to sheik
The Romney Song
(To the tune of “Drive My Car”)

Candidate said he wanted to be
A cause for change, but he cannot see
To be the President up in D.C.
He can’t just keep lying through his teeth

Romney you can kiss my ass
I’m hoping that you come in last
Romney you can kiss my ass
That’s what I think of you

He told the world that he’d make a big switch
By lowering taxes on the rich
He’s acting like that’s what we’d prefer
But he seems more like George Bush the third

Romney you can kiss my ass
I’m hoping that you come in last
Romney you can kiss my ass
That’s what I think of you

Creep, creep’m creep creep yeah
Romney you can kiss my ass
I’m hoping that you come in last
Romney you can kiss my ass
That’s what I think of you

He threw away forty seven percent
And then said “I was kidding, that’s not what I meant”
He thinks everyone is entitled to theirs
So long as they are multi-millionaires

Romney you can kiss my ass
I’m hoping that you come in last
Romney you can kiss my ass
That’s what I think of you

Creep, creep’m creep creep yeah
Creep, creep’m creep creep yeah
Creep, creep’m creep creep yeah
Creep, creep’m creep creep yeah
(fade out)
When Ole Mitt Was Running Bain
(To the tune of “If I Only Had a Brain”)

Sitting in an ivory tower.
With economic power
And lots of bucks to gain
At the time that he was soarin’
All those profits were off-shorin’
When ole Mitt was running Bain

He could make a million seven
By quarter to eleven
And no one would complain
With his corp’rate maneuvers
It was just like Herbert Hoover
When ole Mitt was running Bain

Bridge
Ole Mitt’s The kind of guy
With numerous concerns
He’s so secret all about the dough he earns
So he won’t show His tax returns

As he goes around campaigning
The public is complaining
He doesn’t feel their pain
That is really nothing new
Arising from his point of view
That Mitt got while running Bain

Instrumental

And so now he is a pledging
He never was a hedging
On finishing his reign
It was not inconsequential
Signing docs so presidential
After leaving work at Bain
They Pillaged the Financial Markets
(To the tune of “She Came In Through the Bathroom Window”)

They pillaged the financial markets
Protected by their golden chutes
So now we shake our heads and wonder
What those thieves did with all that loot

Shouldn’t everybody ask ‘em?
Couldn’t anybody see?
What the hell did Bernie Madoff
Do with what he took from me?

They worked for money corporations
And made a million bucks a day
By overturning regulation
‘Cause of that, all of us now pay

You know the market just imploded
And bailouts happened left and right
The oversight was so outmoded
Those thieves got ev’rything in sight

Shouldn’t SEC go chase ‘em?
Make them pay back you and me
Markets need more regulation
Give it legislatively
Oh yeah
White Christmas
(To the tune of “White Christmas”)

They’re dreaming of a white Christmas
A bunch of racists in the town
They hate Obama
And Dalai Lama
Plus anyone whose skin is brown

They’re dreaming of a white Christmas
Those right wing guys all so uptight
Yes they look so silly
White as a lilly
Each one of them is not too bright

Their version of a white Christmas
Is rooted in a simple plan
To seek correction
The next election
Just like a modern Ku Klux Klan

They’re dreaming of a white Christmas
So every immigrant they fight
They would keep the voters all white
And with new ID laws they might
Composting Song (To the tune of “Dixie”)

I am mixing up a pile of rotten
That’s how compost is begotten
    Stow away
    Go decay
    No delay
    Everything

I add all of my table scraps and
Let a little time elapse and
    I can see I will be
    Expertly
    Com-post-ing

Organics if recycled
    Today, they say
Will feed the beans and lettuce greens
    In next year’s summer garden

    Hooray I say
    Let’s energize the garden
    OK Today
    We’ll fertilize the garden
The Sad Story of Thad
(To the tune of “Theme Song from The Beverly Hillbillies”)

You’ve gotta hear the story of the Inuit named Thad
A boat and a gun were the only things he had
One afternoon, while shootin’ at some food
His shot hit a pipe and began to spill crude

*Oil spill, black mold, Prudhoe tea*

Ole Thad realized that he didn’t have a prayer
Exxon told him “move away from there!”
Said “keep it secret if you know what’s good for you”
So he packed up his stuff and escaped by canoe

*Far away. No swimmin’ pools. No movie stars*

Paddling up the coast, Thad had a major scare
Came face to face with a scruffy polar bear
Swimming desperately, it was like a drowning rat
The ice floes a-melting destroyed its habitat

*Warming. Globally. Northwestern passage*

Yes, the two of them - were a very homeless pair
Moving to the north they skedaddled out of there
A hundred miles further was a sight that gave them pause
Unemployed elves who had worked for Santa Claus

*L little guys. Real sad. Little guys*

The elves said the problem just was out of their control
Because Santa Claus was no longer at the pole
The weather getting warmer turned November into May
So they couldn’t make toys for the next Christmas day

*Bad news. Real bad news*

Now the moral of this story should be obvious to you
It’s time for the taking of a grander world view
The energy we’re using has a very hefty price
Ask Thad and the elves and the bear without ice.

*Y’all get that now, ya hear?*
We’re Screwing The World
(To the tune of “Hello Little Girl”)

We’re screwing the world
We’re screwing the world
We’re screwing the world

When the Fahrenheit is high, I sigh (um hmm)
We’re screwing the world
As amphibians decline, I whine (um hmm)
We’re screwing the world
When the holes in ozone grow, I know (um hmm)
We’re screwing the world
As pollution hits us all, I bawl (um hmm)
We’re screwing the world

We’re in a spiral
But no one cares
The world we knew, (it) may not have a prayer
I sometimes think that we are all insane
What’s happened to our brains, brains, brains?

I just hope there’ll be a time when we all
Go fix up the world

Some people say that we should not have fear
Flora/fauna go away
With evolution they’ll reappear
Just wait a couple hundred million years

So I hope there’ll come a day when we say
We’re fixing the world
We’re fixing the world
We’re fixing the world
Oh yeah
Let’s go fix the world
Hyundai, Hyundai
(To the tune of "Monday, Monday")

Na na, na na na na
Na na, na na na na
Na na, na na na na

Hyundai Hyundai
(Na na, na na na na)
Looks good to me
(Na na, na na na na)
Hyundai Accent
(Na na, na na na na)
It is all a car ought to be
Oh Hyundai Accent
Hyundai Accent with your warranty
In twenty twenty yes you will still - be warrantied

Oh Hyundai Accent,
Hyundai Accent with your warranty
(Na na, na na na na)
Come twenty twenty yes you will still -
Be warrantied

Hyundai, Hyundai
I love the way
Hyundai, Hyundai
You cost just what I have to pay
Oh Hyundai Auto
I’m loving your motto.
I’m your kind of guy
So Hyundai, Hyundai
I think I will
Give you a try

Every other car
Every other car
Every other car
Every other car
Every other car on the lot’s so lame, yeah

Something ‘bout the Hyundai style
Something ‘bout the Hyundai style
Something ‘bout the Hyundai style
Lookin’ so fine, it is a crime

Hyundai Hyundai
(Na na, na na na na)
I’m gonna pay
(Na na, na na na na)
Hyundai Accent
(Na na, na na na na)
It’s sure a bright new day
(Na na, na na na na)
Oh Hyundai Hyundai
(Na na, na na na na)
Let’s go and play
(Na na, na na na na)
Hyundai Hyundai
(Na na, na na na na)

(fade)
If You Drive a Monster Car
(To the tune of “When You Wish Upon a Star”)

If you drive a monster car
Going near or going far
Here’s a thing to think about
When you commute

You’re releasing greenhouse gas
Spewing out your Hummer’s ass
Everyone is noticing
That you pollute

Bridge
C-O-2
Coming from S-U-Vs
Is like a bad disease
For earthly breathing

So stop making all that fuss
Come sit down and let’s discuss
When you’re gonna go and get
A new Pri-us
A Waste of Money
(To the tune of “A Taste of Honey”)

A waste of money
The tale of a brand new touch pad

Steve Ballmer said
“We could be so rad”
So Mi-cro-soft
Made a new touch pad

A waste of money
(A waste of money)
Blown on the Surface touch pad

They never learn
Oh they never learn
Setting nine
Hundred million to burn

They make new things only because
They’re copying just what Apple does

A waste of money
(A waste of money)
Trying to buy into cool

They will be back, yes they will be back
They’ll return (they’ll return)
With a thing like (with a thing like)
The Zune
Ring Tones
(To the tune of "Meet the Flintstones")

Ring tones
Tiny ringtones
They’re the modern phone accessories

Inter-rupting silence
They’re the loudest in hi-tech disease

Hear them when you’re driving down the street
You know that you’ve just received a tweet

For those tiny ring tones
You jump up when they’re erupting

Thus interrupting
A quiet peaceful zone

Mother Nature’s Done
(To the tune of "Mother Nature’s Son")

Due to all the greenhouse gas – warming’s on the rise
All day long CO₂ is heating things too much up in the skies

All of the utilities - going by the rules
Generating all the power they sell from fossil fuels

Find alternate energies – we’re under the gun
Get geothermal, nukes and solar pow’r everyone
Or Mother Nature’s done
Porn Free!
(To the tune of “Born Free”)

Porn free!
This offer in email
Reveals ev-ry detail
Porn free if you will respond

Lott-ry
You’ve been named a winner
A lucky beginner
If we can just correspond

Big Pee-nis can be all yours now
Your girl will say “oh wow”
If you will REE-ply to me

Send me
Your Visa card number
Because you are dumber
That’s why I contacted thee
Tweet
(To the tune of “Smile”)

Tweet
Of the grouse you’re eating
Tweet
That your spouse is cheating
If you have tears in your eyes
I’d advise
That you

Tweet
Every friend and lover
Tweet
And then you’ll discover
Your messages are getting buzz
Because

It’s
Certain you’re succeeding
If
Your tweets get retweeting
Such a short text
Should not leave you perplexed

So tweet
That your dogs are trysting
Tweet
What are you resisting?
Your silly life is incomplete
Unless you
Tweet

So tweet
That your dogs are trysting
Tweet
What are you resisting?
Your silly life is incomplete
Unless you
Tweet
All My Junk Mail
(To the tune of “All My Loving”)

Click your mouse, you’ll regret it
On links for free credit
Remember not all things are true
Cuz you like to believe
You’re so eas’ly deceived
I’m sending my junk mail
To you

There are penis enhancers
And cures for all cancers
By buying the things that they say
If you’d just stop and think
You’d not click on that link
But you don’t so get ready to pay

All my junk mail. I will send to you
All my junk mail. You can go pursue

One last thought ‘fore you forward
The text of your password
Because someone just asked you to
If a stranger said, “Please
May I have your house keys ?”
I do not think they’d get them from you

All my junk mail. I will send to you
All my junk mail. You can go pursue

All my junk mail. I will send to you
All my junk mail. You can go pursue
Pay Per View
(To the tune of “Paper Moon”)

So you’re watching a pay-per-view
Lying lazily in your bed
But there’s so much more you could do
If you’d get up instead

Got the latest hot movie views
Cuz you paid for the “value pack”
But perhaps you should watch the news
And get out of the sack

There’s more to life
Than what happens on a screen
So get it right
You have gotta come clean.
Go and break your routine

Watching shows about fantasy
Featuring some famous folks
If you think that’s reality
You’ve bought into their hoax

There’s more to life
Than what happens on a screen
So get it right
You have gotta come clean.
Go and break your routine

Now here’s the take home message man
And I hope that you’ll hear it through
Your life’s got much more value than
The things you pay to view
Paperless Writer
(To the tune of “Paperback Writer”)

Paperless Writer
Paperless Writer

The publishers went and read my book
Seems they liked it all when they had a look
It’s based on a scheme that does not use ink
   But I needed bucks so I chose to use

Acrobat Reader
Acrobat Reader

The plan I know it breaks the old routine
   Puttin’ all the text on a ‘puter screen
I’m not sure how it will affect my take
   But I took the plunge, so I plan to use

Acrobat Reader
Acrobat Reader
Paperless Writer
Paperless Writer

It’s about twelve megs, give or take a few
   And includes JPEGs, lots of color too
It compresses down so it can save you space
   You can find it out there in cyberspace

Acrobat Reader
Acrobat Reader

It’s the hottest thing and it’s the coolest too
   All those bits and bytes on a disk for you
Iffens you’re not happy you can trash it quick
   Such a novel-ty, you can read it in the

Acrobat Reader
Acrobat Reader
Paperless Writer
Paperless Writer
You Never Gave Me The Login
(To the tune of “You Never Give Me Your Money”)

You never gave me the login
For trying out the new demonstration
And now I’m feeling major league frustration
I’m blocked out

I want to use your cool Web site
If you’ll just send me my registration
But in the absence of this information
I’m logged out

Online product, working nice
Have to pay the asking price
All the minutes gone, now nothing works
Maybe I’d be in the black
If I could find a little hack
That would really fix you, you little jerk
Or maybe I just need some new place to go
Maybe I just need some
New place to go
New place to go

It’s easy
Type on the keyboard, enter the login key
Soon I’ll have computer bliss
Just move the mouse and click that box away
The Web site is back . . . today
It’s back . . . today
It’s back . . . today . . . yes it is
Three four five six seven eight
Gets me through the password gate
Three four five six seven eight
Gets me through the password gate
Money Guy
(To the tune of “Honey Pie”)

He was an honest chap
Harvard M-B-A
Then went down to Wall Street
Working at Barclays

And if I could get his ear
I know what I’d say

Money guy
You have got an obsession
That is linked to possession
You have sold your soul

Yeah money guy
You’re requiring some firing
As a way for acquiring
All the things that you own

Corporate takeovers make you pee your pants
Making money the easy way
If you get half a chance

Oh money guy
What you do is horrific
Dumping jobs trans-Pacific
From Malaysia to Seoul

Interlude

Could you folks who outsource work
To China please
Have to work in sweat shop factories

Then money guy
You could make a deposit
On the tiny broom closet
That would be your home
Can’t Buy Enough
(To the tune of “Can’t Buy Me Love”)

Can’t buy enough
Can’t buy enough

She bought herself a buncha bling
Just because the price was right
She purchased almost anything
‘Cause it made her warm inside
She was always craving money,
‘cause money bought all that stuff

She took from me what I could give
And I gave it readily
She made it simple for me when
She was my charity
I just gave her all my money,
And money bought all her stuff

Can’t buy enough,
You know that it is so
Can’t buy enough, no no no no

So I bought her a diamond ring
That I thought was a prize
She went and had it valued and
Then said a fast goodbye
Now I don’t have no girl or money.
I must have bought too much stuff.

Bought too much stuff
Bought too much stuff
I’m At the Wal-Mart
(To the tune of “I Am the Walrus”)

It’s not free when corporate glee
resides in me
Cuz then I spend my mo-oney
   Oh how I run
When bargains come
   See how I go
On buying

Standing in a line
Waiting for the scanner’s beep
Bought a bunch of sweatshirts
   Just to get a discount
I’ve been so naughty now
   I’m at my limit and
I’m overspending,
   It’s never ending
I’m at the Wal-Mart
   Dis-co-ver card

Mister greeter eager grinning
Welcomes me into the store
   See all the fun
When doorbusters come
   See how I run
I’m buying
I’m buying, I’m buying

Labels flag the specials
Coupons help to save some dough
   Poison toys from China
   Nothing really finer
Yes, I’ve been a naughty one
To strip the bar code off
I’m overspending,
   It’s never ending
I’m at the Wal-Mart
   Dis-co-ver card

Thinking ‘bout a rebate special
   In the toys and games
If the clerk’s not here you need a
   Manager to sign a card for you
I’m overspending,
   It’s never ending
I’m at the Wal-Mart
   Dis-co-ver card

Spices, prices many vices
Corporations all are robbing you
This is how it works, those greedy jerks
   See how they smirk
I’m buying

Scan the ATM cards
Debit those accounts most high
Supply side economics, mostly diabolic
   Wow, I think I saw them kicking
   Ben Bernanke’s butt
I’m overspending,
   It’s never ending
I’m at the Wal-Mart
   Dis-co-ver card

Oh no more dough
Oh no more dough
Oh no more dough
   Oh no more dough (no)
Moola moola moola
Moola moola moola
Moola moola moola moola
   Moola moola
The High Cost of Loving
(To the tune of “And I Love Her”)

John pulled out fifty clams
For wooing Gail
Turns out her lovely gams
Were not for sale
He discovered

She called some buddies from
The vice division
Now John is truly bummed
With his decision
Of a lover

Bridge
And now at John
They’ve thrown the book
Cuz he mis-took
Love and money

So learn from John’s mistake
This brainless male
True love for goodness sake
Is not for sale
From a sale

Instrumental

So learn from John’s mistake
This brainless male
True love for goodness sake
Is not for sale
Undercover
Dumb Baby Names
(To the tune of “Sweet Baby James”)
optional words in parentheses

My sister was pregnant, right at the stage
When cravings and sickness occupied ev’ry morning
She wasn’t quite showing. There was plenty of warning
Awaiting the day when she turned the next page

The doctor can’t tell her the sex of the baby
Just too early for painting the walls pink or blue
Closing her eyes she is thinking (that) maybe
She’d better get naming her new babaloo
There was nothing much better to do

Went Googling to find all the way these
Parents pick (out) dumb baby names
Rockford and Breen and a boy named Marine
Can’t she find something better to do?
Like not picking out a dumb baby name

Fast forward two decades the kid is all grown
And he’s starting to step out a bit on his own
In his hands are some papers with a story (that’s) well known
He’s got a big date and just one (big) step to go-o-o-o

The judge says to him, “There are things that are given
And taken for granted by everyone here
You think you can change up the life you are liv’n
If you really believe it then it just might come true
(So) I think my decision is clear”

He says, “I approve (the) petition
The man (here) shall have a new name
I do not oppose the new one he chose
So his first name’s no longer ‘Eighteen’
Mr. Wheeler may call himself James”
Singer Song
(To the tune of “Ave Maria”)

(The words to the original song are in parentheses to help guide the singing)

Teena Maria (Ave Maria)
Ka-a-a-ty Perry oooo (Gratia plena)
La-a-ady Gaga you (Dominus tecum)
J Lo and Mado-o-onna too (Benedicta tu)
Christina Aguilera (In mulieribus)
And McLachlan, Sarah (Et benedictus)
Taylor Swift, Rihanna, Kesha, and a Beyoncé (Fructus ventris tui, Jesus)

‘cido Domingo (Sancta Maria)
John, Paul, and Ringo (Sancta Maria)
And Ringo! (Maria)
Oh Johnny Ma-athis (Ora pro nobis)
Joanus and los Jettos (Nobis peccatoribus)
Justin es un Bie-e-e-eberus (Nunc et in hora)
Shaki-ira Michael Ja-a-ackson (In hora Mortis nostrae)
Lil Kim, Lil Kim (Amen, amen)
We’ve Got to Punt the Ball Away  
(To the tune of “You’ve Got to Hide Your Love Away”)

Once again  
Fourth and ten  
We can’t move the ball

It seems we  
Offensively  
Are up against a wall

It’s no fun  
When we run  
Tackled at the line

They harass  
If we pass  
Their defenses shine

Hey! We’ve got to punt the ball away  
Say! We’ve got to punt that ball away

Now let’s see  
Defensively  
Can we stop them short?

Otherwise  
The other guys  
Could get another score

It’s bad news  
If we lose  
That would disappoint

So instead  
Beat the spread  
We need just five more points

Hey! We’ve got to punt the ball away  
Say! We’ve got to punt that ball away
What’ll I Chew? (The Puppy Song)
(To the tune of ‘What’ll I Do?’)

Seems you’ve decided to go for a bite
    Now I’m all alone un-a-ttended
      I guess this somehow
         Is my plight tonight
    So I am sure feeling un-friend-ed

      Maybe I’ll chew
      Your shoe to pass the time
          Cuz I miss you
              What can I chew?

      Maybe I’ll poo
      Onto your new J. Crew
          I got the screw
              What’ll I chew?

What’ll I chew when I am feeling blue?
    And I cannot find you?

        I’m so alone
        My bone is not in view
            I need a clue
                What’ll I chew?

Instrumental

A really good chew might stop me feeling blue
    When I am not ‘round you

        I’m all alone
        At home and not with you
            It’s sad but true
                What’ll I chew?
Gay Waiter
(To the tune of “Day Tripper”)

Got a good reason
For going and eating out
   It is the season
For doing my feeding out

There is a gay waiter
Brokeback rider yeah
   It took him so long
To come out and he’s out

He’s an old geezer
He must be sixty years old
   (A) customer pleaser
Making sure all the beer’s cold now

He is a gay waiter
Brokeback rider yeah
   It took him so long
To come out and he’s out
Fairway Eleven
(To the tune of “Stairway to Heaven”)

There’s a hole on the course. It is one of the worst
You’ll encounter at fairway eleven
If you play there you’ll see, you can take it from me
In a word you will see it’s a nightmare

Nooo, noo do not go around the fairway eleven

There’s a flag in its hole. It will shatter your soul
When you line up your ball on the golf tee
Down the fairway you’ll see, there’s a sand trap or three
Don’t assume you’ll avoid those frustrations

Ooh, I have to ponder
Ooh, I have to ponder

Now my worry’s increased. There’s a wind from the east
And my caddy is shivering beside me
If this drive I can hit, I will not score like shit
And my buddies all then will admire me

Ooh, I need to focus
Ooh, I need to focus

May this drive go I pray, right straight down that fairway
Let the dogleg help me if I shank it
Then I’ll chip to the hole. The green is my goal.
If the wind helps me I’ll surely thank it

Ooooh
The caddy sneezed when I was swinging, I got distracted
My concentration was affected
I hit my tee shot in the rough and then sure enough I
Fell flat on my face getting to it

It was such a blunder

Oooooh

My head is spinning and I’m dizzy, so in a tizzy
The ball is buried in some deep sand
Oh caddy go and get a shovel for this trouble
Let’s just pretend this is just what I’d planned

So then I’m finally on the green
The sweetest place that I have seen
My shots on this hole are obscene
If I sink this shot I score thirteen
(But) I ring the cup and miss it clean

I try again and miss it worse
My putting game I should rehearse
This goddamned hole has got a curse
So I’ll just finish on this verse

When I add up just my putting - it’s se-ven
On Audrey
(To the tune of “On Broadway”)

There are a few things you should know ‘bout Audrey
(‘bout Audrey)
Her golden voice booms out and fills the air
(‘round Audrey)

She is at ease where’er she’s at
‘Cause she was born a service brat
And now today she’s a department chair
(that’s Audrey)

The future’s really very bright for Audrey
(for Audrey)
Her voice is mastered on a CD-ROM
(oh Audrey)

We’re lucky that she had desire
For singing in a high school choir
And what a guy she found in husband Tom
(oh Audrey)

And so we sing as one tonight with Audrey
(with Audrey)
In Audrey’s backwoods birthday music show
(with Audrey)

She has been really truly great
Since nineteen hundred fifty eight
Congrats to Audrey, you have reached five-oh
(yes Audrey).
She Likes You
(To the tune of “She Loves You”)

She likes you meh, meh, meh
She likes you meh, meh, meh
She likes you meh, meh, meh, meh

You think that you’re in love
With that girl who’s really swell
You think she’s real hot stuff
But I don’t think you can tell

You know she likes you
It is true but here’s the score
Yes, she likes you
As a friend but nothing more

You think that she’s a catch
On one point it is true
She’s found the perfect match
Too bad that it’s not you

There is another
Who has caught your lady’s eye
He’s her lover
And you can’t kiss her goodbye

Oooooo

She likes you somewhat, yeah
But only meh, meh, meh
Ah love’s like that
No reason to be sad

(skip to end of song)
Ah love’s like that
No reason to be sad
Meh, meh, meh
(Fade)
Anthem of the Ginseng and Tonics
(To the tune of “My Way”)

And now, the concert’s done
We were a musical sensation
    That was a lot of fun
It’s time for serious libation

Our singing was off key
The audience so catatonic
One cause, to put simply
Ginseng and Tonics

Rehearsals where we played
Our thanks to Cliff and Chere
Their neighbors were dismayed
Can’t blame them all for being wary

Our voices raised aloud
Aren’t really as a whole symphonic
And so, we flee from crowds
Ginseng and Tonics

The public wailed
Our fans did too
What hurt the most
They said P-U
In spite of all
We did not stop
Let’s hope that they
Don’t call the cops
The more we play
It hurts to say
Ginseng and Tonics

The critics all decried
Together in conformance
The music genocide
Each time we do a new performance

What’s more they all complained
We’re like the plague that is bubonic
A scourge most inhumane
Ginseng and Tonics

But we march on
Thus undeterred
We’re not afraid
Of critics’ words
With voices strong
Though aging some
We hope our fans
Will all succumb
Next time they see
On the marquee
Ginseng and Tonics
Science Song Verse
(to the tune of “Gilligan's Island Theme”)

I’m gonna tell a story ‘bout
How this talk came to be
The means by which I’m speaking now
At the H-M-S-C

I was sitting in a motel room
Last Sunday one p.m.
An email came from Ruth MacDonald
Could I please help them? Could I please help them?

Their speaker scheduled at this hour
Greg Crowther, Ph.D.
Was having travel plans go sour
Uncontrollably. Uncontrollably

A trip made to the east coast led
To something unforeseen
His talk for here had gotten blown
By Hurricane Irene. Hurricane Irene

So now I stand in front of you
Pinch hitting here for Greg
With silly songs . . .
. . . and lyrics of
. . . some science that is prime
A rhyme or two
For helping you
Get science songs inside of your minds
How Songs Stick in My Brain
(To the tune of “Gilligan’s Island Theme”)

I’d like to tell you all about
How songs stick in my brain
Of that there surely is no doubt
So let me please explain

I wake up every morning at a
Very early hour
But something happens every time
I step into the shower, I step into the shower

My mind begins to fixate on
A single melody
That’s rattling inside my head
A tiny bit off key, a tiny bit off key

I whistle hard to get it out
But it’s to no avail
No matter what I try to do
The melody prevails, the melody prevails

To keep from driving others nuts
I formed a simple plan
Recycling tunes to try to help
My students understand, my students understand

So thus were born the Melodies
Of metabolic kinds
For teaching science principles
With a virus of the mind
The Crappiest Weather
(To the tune of “Happy Together”)

It’s such a rainy night, tonight
The radar’s looking very bad
I’m feeling sad
We’re headed for the wintertime
It makes me mad
The crappiest weather

And now the forecast says
There’s even more
A front is coming from the west
We can’t ignore
I think I’m gonna be depressed
And stay indoors
The crappiest weather

(Chorus)
I can’t sit still while it is pouring outside
It’s just not right
As it’s falling, seems like
The skies have been gray
For forty nights

Gloom and rain
And rain and gloom
No matter if it stops a while
It will resume
The plants are really liking it
I must presume
The crappiest weather

Gloom and rain
And rain and gloom
No matter if it stops a while
It will resume
The plants are really liking it
I must presume
The crappiest weather

The crappiest weather
The crappiest weather

Me and the weather
Unhappy together
The crappiest weather
(Fade)
Under the Rainbow
(To the tune of “Over the Rainbow”)

Sum-mer time in the valley
  Cloud-y skies
Rain’s re-turned for the season
  Not such a nice surprise

Oh my! Where did the sun go?
  Gloomy days
Full of raindrops a-falling
  One season out of phase

Tonight I hope I’ll see the sky
But if I can’t I hope it dries up one day
The weather forecast missed it bad
Now all the local folks are mad
A drizz-ly Sun-day

Down here under the rainbow
  Hue and cry
Birds fly over our rainbows
  JUST trying to stay dry

Down here under the rainbow
  People scoff
Longing to BE like eagles
  So as to get dried off

If it is not December yet
Here in the valley
Why am I so wet?
Let It Rain
(To the tune of “Let It Snow”)

Oh the Oregon weather’s dowdy
‘Cause the sky is mostly cloudy
You can’t stop it if you complain
So let it rain
Let it rain
Let it rain

It doesn’t show signs of slowing
And it’s rarely right for snowing
Though it’s driving some folks insane,
Let it rain
Let it rain
Let it rain

When it finally turns out dry
We’ll be putting away our rain gear
It will probably be July
But I’ll surely miss the rain dear

‘Cuz the sound of the falling rain
Pitter pattering down the drain
Makes music inside my brain
So let it rain
Let it rain
Let it rain

Make It Stop
(To the tune of “Let It Snow”)

So the forecast says much more raining
It’s of this that I’m complaining
I get cranky from all the slop
Oh make it stop
Make it stop
Make it stop

It is dark and it’s gray and gloomy
The climate is out to screw me
I go crazy with drip, drop, drop
Please make it stop
Make it stop
Make it stop

Every time that I look outside
And I spot the sun then I know
That our weather is Jekyll/Hyde
When it goes out and makes a rainbow

Now I know if the rain is dropping
That my clo-thing will be sopping
I don’t care if it’s good for crops
Just make it stop
Make it stop
Make it stop
Getting Wetter Every Day
(To the tune of “Getting Better All The Time”)

It’s getting wetter every day
I’m standing outside in a pool (and I must complain)
The weather ‘round here is so cruel (going down the drain)
It’s falling right down (Oh no)
Hitting the ground (uh oh)
This climatic change isn’t cool

I notice IT is getting wetter (wetter)
A little wetter round these parts (it’s getting much worse)
I cannot stand this gloomy weather (wetter)
It’s getting wetter . . . . way off the charts

I’m screaming at my weatherman
For ruining our weekend plan
He promised to me, it would be rain-free
But now we need A new game plan

I hate to complain about the weather (weather)
That’s getting wetter every day (all so wet)
There’s surely no doubt it’s getting wetter
It’s getting wetter
Here comes the spray

Getting wetter weather every day!

:this cuts off a couple of stanzas from the original song:
( emphasized words are CAPITALIZED)
Crappy Days are Here Again
(To the tune of “Happy Days are Here Again”)

Crappy days are here again
The sky above’s not clear again
And the sun has disappeared again
Crappy days are here again

Rain is falling from the sky
I wish I knew the reason why
Guess I’ll have to wait until July
For the weather to be dry

Bridge
I do not mean to harangue
Since rain provides yin and yang

Because the flowers every one
Love moisture followed by the sun
Let’s stay happy ‘til the rain is done
In Corvallis, Oregon
Month of Rain
(To the tune of “King of Pain”)

There’s some rainfall impacting against my cheek
It’s the way it’s been going for the past two weeks
There’s another one falling now, a bigger drop
And the forecast is saying that it will not stop

So I’m standing outside beside my weather vane
Staring out at the water flowing down the drain
And I wish I it would stop before I go insane
But the forecast is calling for a month of rain

There’s an awful dark spot on the weather map
(It's a lot of rain)
Showing more and more of the same old crap
(Going down the drain)
There’s a torrent of water flowing down the creek
(It’s the same refrain)
If it goes on much longer I am gonna freak
(Here it comes again)

And before I go on I need to ascertain
How the climate is changing could you please explain
The effect it will have upon the earth’s terrain
If it’s true that we’re doomed to have a month of rain?

There’s another inch more in the gauge outside
Dripping liquid sunshine that we take in stride
There’s a giant splotch across the radar screens
An image that everyone knows what it means

(skip verses)

Month of rain
It will not stop month of rain
It will not stop month of rain
(fade)
Oregon City Song
(To the tune of “Desperado”)

Umatilla.
Aloha, Sandy and Bridgeport
Independence and Newport
Astoria too
Roseburg and Gresham
Elmira Tillamook Salem
There’s Damascus PrineVILLE and
The Bay known as Coos

Enterprise and Milton Freewater
Scappoose Scio Toledo
Tigard Seaside Newburg JefferSON
Rickreall Shedd and Grants Pass
Lebanon and Lake Oswego
Mount Angel Jacksonville and HermisTON

Estacada
Aumsville Sunriver Fort Klamath
Seal Rock and Philomath
Bend Keizer Sweet Home
Molalla . . . Wallowa
There’s Sublimity Dayton
Tu-a-latin Stayton Klamath Falls and Gladstone

Hood River Medford and Canyonville
Drain Diamond Lake and Eddyville
McMinnville Ashland Redmond and John Day
Mount Vernon Troutdale Albany
Christmas Valley Browsville Welches Deee-Poe Bay

Lincoln City
Eugene Springfield and Corvallis
Burns Silverton Dallas - also La Grande
There is Camp Sherman, Tidewater Reedsport and Talent

Milwaukie Cayuse and Sisters
Hillsboro Port Orford
Beaverton and there is He-LIXXXX
And PEE- DEEEEEEEEEE - XXXX
At the Coast Oregon’s Fine All the Year
(To the tune of “The Most Wonderful Time of the Year”)

At the coast, Oregon’s fine all the year
   There are beaches a-glistening.
Plus birds softly whistling and great local beers
   At the coast, Oregon’s fine all the year

There’s the most splendid of times in the fall
   You can play some iTunes
Riding over the dunes if you yield to the call
   To the splen-did-li-est times of the fall

   In the summer there’s hiking
      And 101 biking
   And weenie roasts out in the sand
   There are beaches with kites and great sunsets at night
      And surprises you could not have planned

   As for spring you can have fun every day
      Sit and sample pale ales
While you’re watching the whales at the Port of Coos Bay
   In the spring there’s something new every day

   In the winter, the morning
      Might bring a storm warning
   To cause an increase in the tide
   You can touch the sea breezes while tasting the cheeses in Tillamook
      And in Seaside

At the coast, Oregon’s fine thru the year
You can visit the park named for Lewis and Clark, so come on out here
   To the coast, Oregon’s fine
   Have a magnificent time
At the coast, Oregon’s fine all the year
VooDoo
(To the tune of “My Guy”)

A tribute to Portland’s best donut shop

There's nothing I know
That sets me aglow like VooDoo
No ifs, ands, or butts
I love the do-NUTS at VooDoo

I'm cravin’ their taste
As a fried dough lover
Who's suddenly discovered
He - wants another

You had better believe
I wanna receive some VooDoo

No biscuit or scone
Will ever dethrone my VooDoo
(VooDoo)
No other glaze
Could ever take the place of VooDoo
(VooDoo)

It’s my favorite kind of morning star
Just like a special kinda breakfast - caviar
There’s not a donut today
That can take me away from VooDoo

There’s not a place I know
With the deep-fried dough of VooDoo
(fade)

I consider it my mission to spread the word
In this condition I won’t be deterred
On the subject of taste it is a fact
My taste buds feel like they’ve -
Been shellacked

About the Merry Metabolic & Miscellanic Melodies

I started writing Metabolic Melodies in 1995 when I taught my first big biochemistry class, BB 451. I was pleased how it went and I wanted to do something special. I had seen a copy of “The Biochemist’s Songbook” by Harold Baum and I thought I could do something like it. The first lyric I wrote was “Battle Hymn of Biochemistry” and it was certainly inspired by Baum. I wrote a second one that first year and I was off and running. The Melodies started out being exclusively about biochemical processes, but increasingly I ventured into other areas, so I decided to coin and add the word “Miscellanic” to the title to reflect the miscellaneous nature of them. Sometimes people ask if I’m inspired by Weird AI, but the truth is I’m not. I’m much more influenced by Neal Gladstone - check out his stuff at nealgladstone.com. This book is current with Melodies as of June, 2014. If you’d like to contact me, send email to ahernk@orst.edu. I also have a LOT of free educational materials for biochemistry at the following URL - http://oregonstate.edu/dept/biochem/ahern/123.html