

Ode to ATP

From coquettish modesty, I presume,
You never would disclose your full name,
But my textbook did publish it
In due acknowledgement of your fame.
Adenosine triphosphate is so flamboyant,
Such a worthy appellation for you,
Whose biological functions are indispensable
And so requires a notable title too.
I thought my reverence quite sufficed,
But my textbook corrected such imprudence.
What you are and what you do
Augment my loftiest fantasies of science.
I compliment your chemical structure
For its effectiveness in its simplicity,
Comprising the lovely amino acid adenosine
And sugary ribose, additionally,
But it is your phosphate groups that do provoke
My most exciting exclamations,
Like three embellishments appended to you,
That facilitate magical operations.
How can your fragile phosphate tails
Ever contain such impressive energy,
That is derived from mutual negative repulsion,
Which in the bonds generate instability?
Therefore, you are a repository of potential
Like a coiled spring compressed
Or a machine with immense tendency
To disseminate good services to the rest.
You are much like a philanthropist
By phosphorylating molecules with your mark,
So that they can utilize this largesse
To metabolize after receiving such a spark,
Once accelerated by enzymes that catalyze,

And coupled with reactions consuming energy,
So I breathe only because of you,
Because every living cell is your beneficiary.
You are miraculous in your multiple facilities,
For to yourself you can apply always
The same procedures other molecules perform,
By collecting energy from exergonic pathways.
You recycle what living organisms contain,
So this regeneration mechanism is laudable.
You sustain the complex components of life
With the smallest capital possible.
In your labors, you assume a martyr character
Who condones the process of hydrolysis
That removes one of your precious phosphates
To benefit molecules in other processes.
What functions can I perform without you?
The world in your absence is an absurdity.
You stimulate molecules from their sluggish lives
And infuse them with convenient energy.