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Russ Hillie
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Flavoproteins & Health
Flavoprotein Dyanamics
Fine-tuning Flavin Chemistry
Flavins in Signal Transduction
Flavins in Natural Product Biosynthesis
Flavins for Chemical Synthesis
Flavin Physics & Chemistry
Complex Flavoproteins
Structure & Coupling Mechanism of Complex I
Oxygen Activation
Non-Redox Flavin Catalyzed Reactions
A Look Back

Symposium Program:

Berkley, CA USA
UC Berkley
24 - 29 July 2011
17th International Symposium
on Flavins and Flavoproteins

FLAVINS AND
FLAVOPROTEINS
2011
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2011
Aspergillus fumigatus siderophore A

**Effect of pH on the Reductive and Oxidative Half-Reactions of**

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**Materials and Methods**

Reaction with NADPH or NADH

In addition to the results of the reductive half-reaction, we have studied the reactivity of the reductive half-reaction conditions at various pHs and oxidations. In the case of NADH or NADPH, this reactivity decreases in the presence of the oxidized Sia under rapid stirring and the formation of the oxidized Sia under rapid stirring.

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**Introduction**

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**Effect of pH on the Reductive and Oxidative Half-Reactions of**

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Results and Discussion

Spectrum and Absorbance of NADPH and NADH at Various Phases. The absorption of NADPH and NADH at various pH values was studied to determine the pH effect on the redox potential of the enzyme.

The enzyme was assayed at various pH values and the absorbance was measured using a double-beam spectrophotometer. The absorbance at 450 nm was recorded for each pH value.

Conclusions

1. The enzyme was assayed at various pH values and the absorbance was measured using a double-beam spectrophotometer. The absorbance at 450 nm was recorded for each pH value.

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Conclusions

| pH  | NADPH | NADH | HD
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<td>4.0 from 0.2</td>
<td>1.0</td>
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<tr>
<td>7.0</td>
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<td>4.0 from 0.6</td>
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<tr>
<td>6.0</td>
<td>0.1 x 10^-3</td>
<td>4.0 from 0.8</td>
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Table I. Pre-steady-state kinetic parameters determined for both the formation of the intermediate and oxidized Sida.

The oxidation of the intermediate in the NADH and NADPH were used as reference

Figure 2. Effect of pH on oxidation of Sida. (A) shows the pH of various conditions at 37°C. (B) shows the pH of various conditions at 37°C. (C) shows the pH of various conditions at 37°C.

Figure 3. Oxidation of NADH dependence on oxidation of Sida at various pHs. (A) shows the pH of various conditions at 37°C. (B) shows the pH of various conditions at 37°C. (C) shows the pH of various conditions at 37°C.

Figure 4. Oxidation of NADPH dependence on oxidation of Sida at various pHs. (A) shows the pH of various conditions at 37°C. (B) shows the pH of various conditions at 37°C. (C) shows the pH of various conditions at 37°C.

Figure 5. Oxidation of NADP dependence on oxidation of Sida at various pHs. (A) shows the pH of various conditions at 37°C. (B) shows the pH of various conditions at 37°C. (C) shows the pH of various conditions at 37°C.

Figure 6. Oxidation of NAD dependence on oxidation of Sida at various pHs. (A) shows the pH of various conditions at 37°C. (B) shows the pH of various conditions at 37°C. (C) shows the pH of various conditions at 37°C.

Figure 7. Oxidation of NADH dependence on oxidation of Sida at various pHs. (A) shows the pH of various conditions at 37°C. (B) shows the pH of various conditions at 37°C. (C) shows the pH of various conditions at 37°C.

Figure 8. Oxidation of NADPH dependence on oxidation of Sida at various pHs. (A) shows the pH of various conditions at 37°C. (B) shows the pH of various conditions at 37°C. (C) shows the pH of various conditions at 37°C.

Pseudomonas aeruginosa: subsite interactions of O2 addition
by 3-hydroxyphenazine 4-hydroxylases in oxygen reduction.

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2. Inhibition studies. II. Basic Chem. 1974, 49, 4371-4376.

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References

Research supported by NSF award MCB-1012384.

Acknowledgements

showed that the pyrazine side chain of the C4a-hydroxyphenazine is higher than 10.0.

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