



US005652134A

United States Patent [19]

[11] Patent Number: **5,652,134**

Maclachlan et al.

[45] Date of Patent: **Jul. 29, 1997**

[54] **HYBRIDOMAS PRODUCING BLUETONGUE VIRUS-SPECIFIC MONOCLONALS**

[75] Inventors: **N. James Maclachlan**, Davis, Calif.;
Ginger M. Reddington; **John J. Reddington**, both of Wilton, Conn.

[73] Assignee: **North Carolina State University**,
Raleigh, N.C.

[21] Appl. No.: **594,546**

[22] Filed: **Oct. 9, 1990**

[51] Int. Cl.⁶ **C12N 5/18**; C07K 16/10;
C12Q 1/70

[52] U.S. Cl. **435/339**; 530/388.3; 435/5

[58] Field of Search 435/5, 70.2, 70.21,
435/172.2, 240.27, 235-238; 436/548; 530/387,
388.3

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,873,189 10/1989 Jochim et al. 435/68
5,188,942 2/1993 Reddington et al. 435/28

OTHER PUBLICATIONS

Ausubel, F.M., et al., eds., *Current Protocols in Molecular Biology*, J. Wiley NY, v.2, suppl. 10, Unit 11.1.2. (1990).
Afshar, A., et al., *J. Clin. Microbiol.* 25: 1705-1710 (1987).
Callis, J.J., et al., *Illus. Man. for Recognition and Diagnosis of Certain Animal Diseases*, Mex. US Com. FM. Dis, Plum Island, 56-61 (1982).

Carter, P.B., et al., *Vet. Clinics of North America: Small Small Animal Pract.* 6: 1171-1179 (1986).

Guesdon, J.L., and Avrameas, S., *Immunochemistry* 14: 443-447 (1977).

Heidner, H.W., et al. *J. Gen. Virol.* 69: 2629-2636 (1988).

Jochim, M.M., in *Bluetongue and Related Orbiviruses*, Alan Liss pp. 423-433 (1985).

Jubb, K., et al., *Pathology of Domestic Animals*, v.2, Acad. Press pp. 108-112 (1985).

Lunt, R.A., et al., *J. Gen. Virol.* 69: 2729-2740 (1988).

MacLachlan, et al., *Am. J. Vet. Res.* 45: 1469-1473 (1984).

MacLachlan, et al., *Am. J. Vet. Res.* 48 1031-1035 (1987).

Olsson, L., et al., *J. Immunol. Methods* 61: 17-32 (1983).

Ozawa, Y., in *Bluetongue and Related Orbiviruses* Alan Liss pp. 13-20 (1985).

Roy, P., *Virus Research* 13: 179-206 (1989).

Whetter, et al., *J. Gen. Biol.* 70: 1663-1676 (1989).

Primary Examiner—Marian C. Knode

Assistant Examiner—Donna C. Wortman

Attorney, Agent, or Firm—Bell, Seltzer, Park & Gibson

[57] **ABSTRACT**

Hybridomas producing monoclonal antibodies specific to Bluetongue virus are described. The antibodies are useful in rapid, competitive enzyme-linked immunosorbent assays (cELISAs) for the determination of Bluetongue virus antibodies in serum.

9 Claims, 1 Drawing Sheet